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SUMMER 1984 STUDY OF DISPERSED CAMPING ALONG A SEGMENT OF THE AU SABLE RIVER

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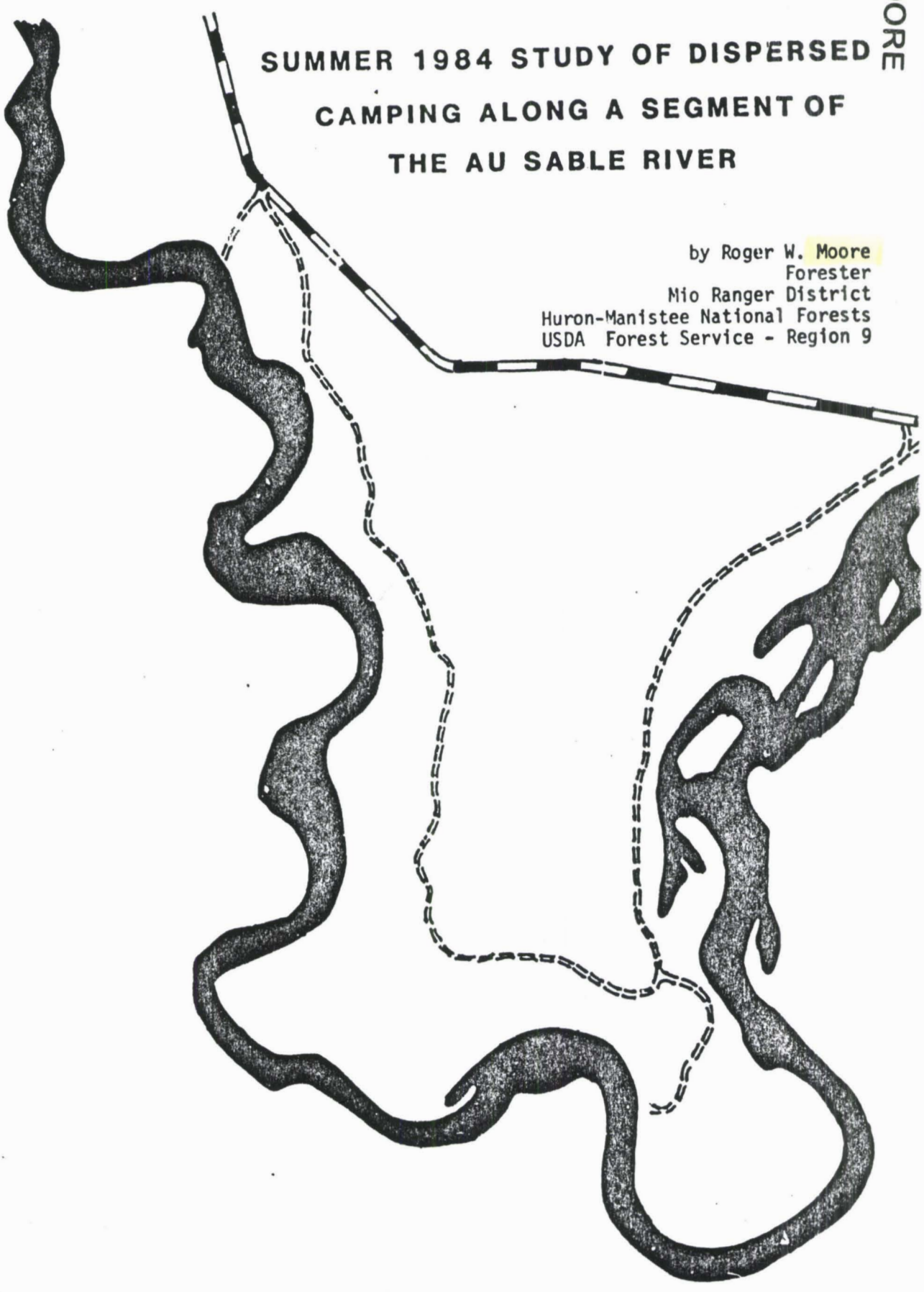

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Summer 1984 Study of Dispersed Camping Along a Segment of the AuSable River

ABSTRACT

The AuSable River Loop Area near Mio on the Huron National Forest is desireable for campers as it is close to a small town, yet in a highly esthetically pleasing area. Several user groups - campers, canoeists and local residents regularly use this area. Since the purchase of the property from Consumer's Power Company in December 1980, several problems have arisen between these user groups.

These problems which include litter, noise, human waste, and overcrowding at some sites are recognized as serious, by National Forest managers. In 1984 the AuSable River was designated as a "Scenic River" by Congress. To alleviate these concerns, the Forest must implement new regulations governing camping in the area that meet Scenic River requirements and, at the same time, add new camping facilities such as running water and vault toilets to address both the needs and desires of the campers and area residents.

This study defines the problems and offers solutions to these problems at the Loop area.

This paper was prepared as a student project in partial fulfillment of the Professional Development for Outdoor Recreation Management program at Clemson University. It in no way reflects USDA Forest Service policy nor are the opinions expressed those of anyone other than the author.

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CHAPTER I

INTRODUCTION

Background (Figure 1)

Recreation and commercial use has a long history on the AuSable River. As early as 1873 eastern railroads were advertising trips to the area for hunting, fishing and berry picking. One railroad advertised, "Take your wife and some fishing tackle and go north." People came from all the major eastern cities and even from foreign countries to camp and relax on the AuSable.

During the next 20 years, billions of board feet in logs were sent down the AuSable to Lake Huron. For their own purposes the loggers widened, blasted, dammed and generally changed the sluggish and narrow AuSable's flow. Land was stripped of trees and the AuSable and its tributaries were polluted with logging debris. Excessive hunting and fishing also took its toll. By the late 1800s, sportsmen became concerned there would soon be no place to hunt, fish

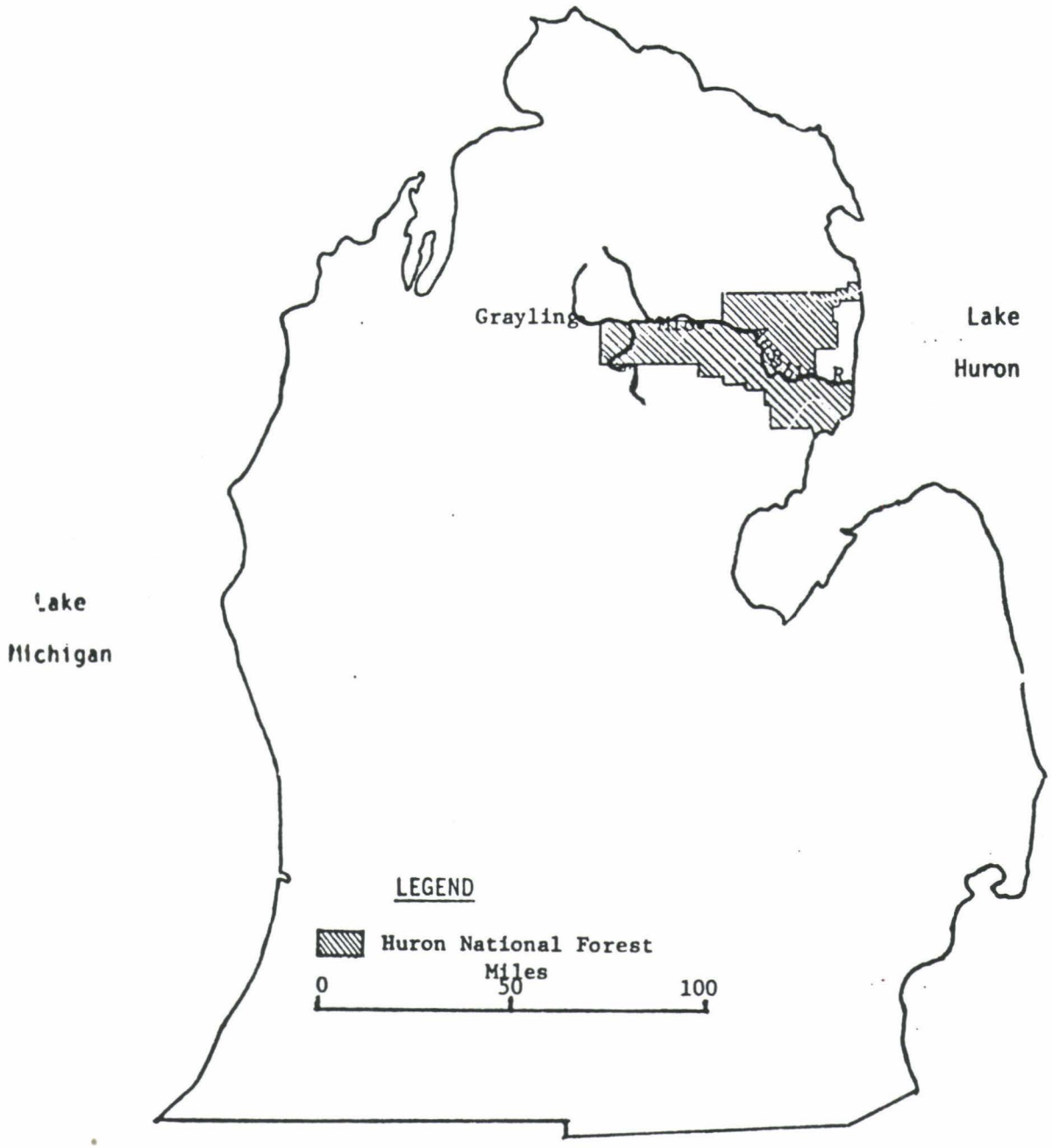

Figure 1. AuSable River and its Branches

and get away from it all. They became actively engaged in conservation efforts such as reforestation and stocking the river with trout. Sportsmen's organizations formed leagues and lobbied the State Legislature for conservation legislation. (Miller 1965)

Extensive conservation measures were not initiated until the Civilian Conservation Corps, in the 1930s, reforested cut-over lands and cleaned-up the river and stocked it with trout. (Banana Belt Review 1936)

The AuSable, therefore, is not a wild and pristine river. It has seen much recreation and commercial use, including six power dams built during the early 1900s. Conservation efforts have preserved large segments from development and these segments have returned to a more scenic and primitive condition.

Congress amended the 1968 Wild and Scenic Rivers Act (Public Law 90-542) in 1975 to include the AuSable as a "study river." This study was completed in 1979. In October of 1984, P.L. 90-542 was amended by P.L. 98-444 to designate only Segment 3 recommended by the Forest Service study as

part of the National Wild and Scenic River System. Segment 3 is a 23 mile stretch between Mio and Alcona Pond.

The United States purchased land in 1980, 1983 and 1984 totaling 4,840 acres within Segment 3 from Consumers Power Company. The Forest Service will complete an exchange with the State of Michigan for 740 acres along the river in 1985. This will give the United States about 95 percent ownership within the designated river corridor.

Scenic River areas are defined as "Those rivers or sections of rivers that are free of impoundments with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads" (National Wild and Scenic Rivers Act, P.L. 90-542, 1968, Sec. 2.(b)(2)).

Administration of rivers under the Act is defined as "Each component of the national wild and scenic rivers system shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without insofar as is consistant therewith, limiting other uses that do not substantially interfere with public

use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area" (National Wild and Scenic Rivers Act, P.L. 90-542, 1968, Sec. 10.(a)).

Study Area Descriptions (Figures 2 & 3)

The Mio District surveyed its portion of Segment 3 in 1982 to see what activities were occurring on and adjacent to the river. The survey covered 10.5 river miles, and found some form of recreation activity at 45 locations. Most sites appeared to receive light to moderate day use. During 1983, District personnel made an effort to observe these sites to determine types and intensities of activities. It was evident that an irregular loop in the river about 2.5 miles east of Mio received the most use. This loop-area was part of the 1980 purchase. The principal activities in the area were fishing, camping and rest stops by canoeists. One site

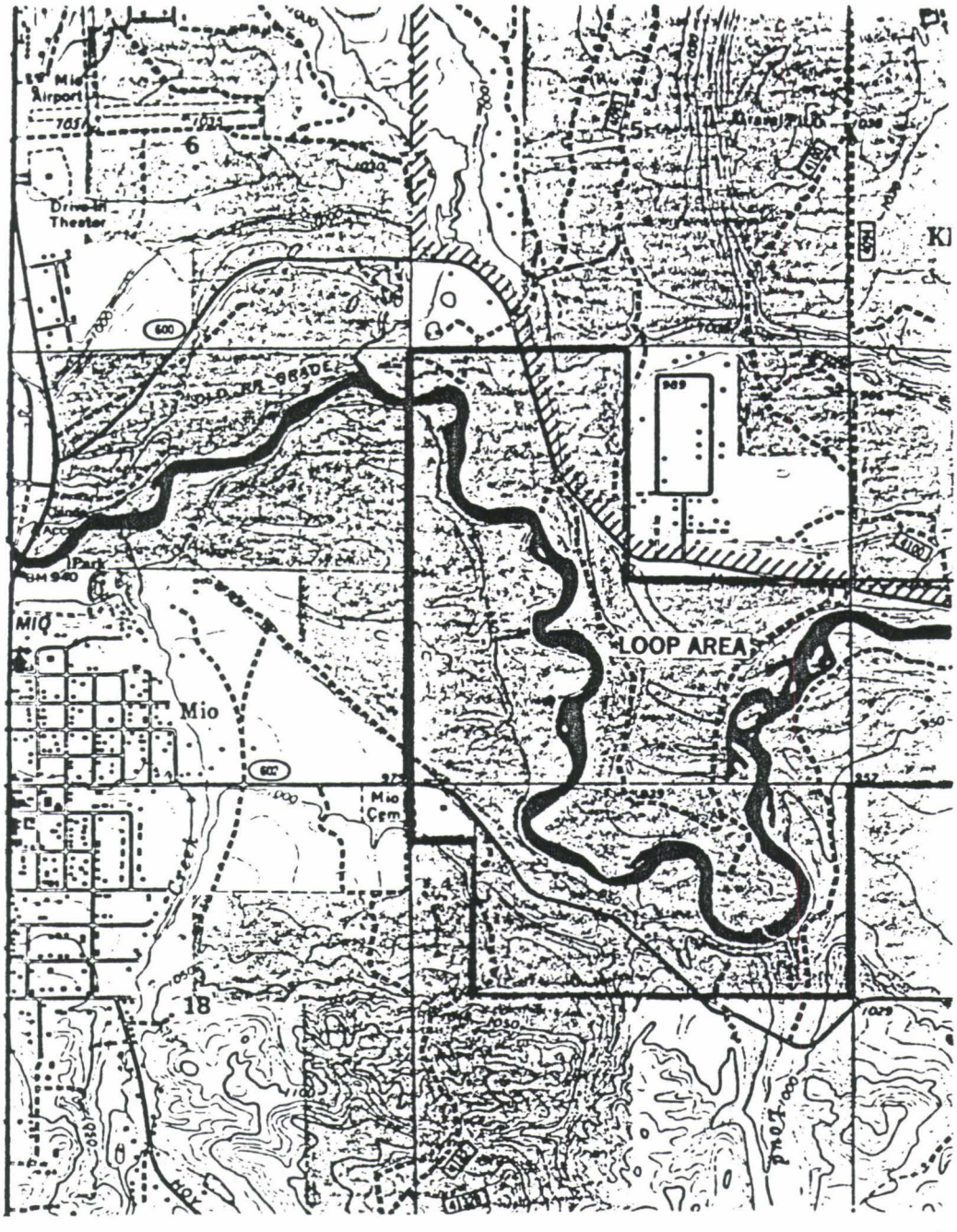

Figure 2: Study Loop Area and Vicinity.

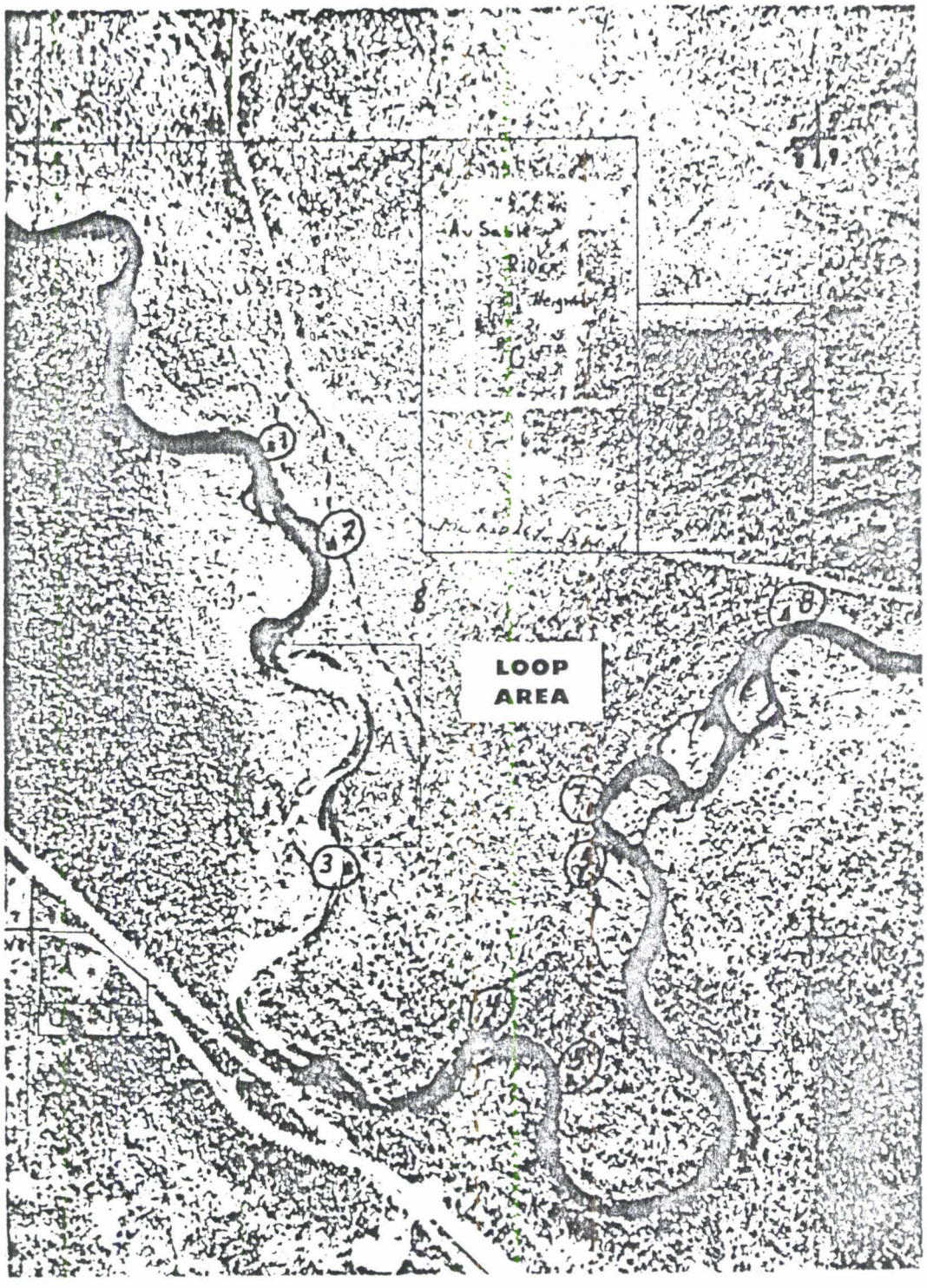

Figure 3: Location of Loop Study Area. ▲ Camping Sites in Study.

called Tunison's Landing, was also a principal put-in point and swimming area of local residents and cabin owners.

The loop, has 11 sites along the river, six of which are primarily used by campers. Fishermen account for the most use on five sites, and canoeists primarily use two sites. This study concentrates on eight sites where camping was observed during the 1984 summer season.

When Consumer's Power Company was the landowner, it condoned only day use activities. Camping was not allowed and areas were posted. The company paid one individual, Warren Boerner, to patrol its land along the northern part of the Manistee River and all of the AuSable River. According to Boerner, the patrols were conducted during the summer on Thursday, Friday and Saturday of each week. As he put it, "The areas were covered on a hit and miss basis." He said, the loop area received the most recreation use of land within the Mio District boundary. He also remembered that the only regularly used camping spot, within the loop area, was Site 3.

Campers along this stretch were still under the assumption Consumers' day-use policy was still in effect even after the United States took ownership. Campers asked if it was all right to camp and most were surprised to find camping was allowed. Management Objectives for scenic rivers may include limited but screened public use facilities such as campgrounds (Flowing Free, River Conservation Fund 1977).

With the exception of a small strip of land that is part of the AuSable Heights Subdivision along County Road 600, the entire loop area is in Federal ownership. County Road 600 (McKinley Road) serves as the northern boundary. A "two track" road that loops around the inside of the area and is connected at each end by McKinley Road, serves as the area's access. Several small two-tracks leave the main two-track to access individual sites.

Except for an 11-acre red pine plantation near the center of the loop, most of the area is covered by an oak/pine mix. Balsam fir and mixed lowland hardwoods are more prevalent near the river. The soils are primarily of glacial origin.

Except for the southeast and southwest extensions where the soils are organic and alluvial deposits, the area is sandy and excessively drained.

Although the Mio Dam is used by Consumers Power Company for power generation, Mio Dam discharge is equal to pond inflow. The AuSable River surrounding the loop area is wide, flows at a moderate speed of two to four m.p.h., and has sufficient depth for safe, pleasant canoeing. It is a "Trophy trout area" and is heavily fished, primarily by local people. (AuSable Wild and Scenic River Draft Report and Environmental Statement 1979)

Significance of the Study

People in the Mio area became concerned about changes occurring on the AuSable in June of 1983 due to increased recreation use. They were primarily concerned with human waste, litter and noise from canoeists and campers. The greatest problems were in the loop area. The Forest Service took measures to reduce these problems by installing toilets at sites one and five and increasing patrols of the area. It also began collecting information in 1983 and 1984 to prepare a River Management Plan.

The purpose of this study is to:

1. Determine what types of groups and individuals camp in the loop and their reasons for camping in this area.

2. Determine what management actions campers and residents prefer and the implications of scenic river criteria

3. Make recommendations to the Forest Supervisor for management of the loop area.

Statement of the Problem

The loop area, surrounded by the AuSable River on three sides, has become an ideal location for overnight camping since the United States took ownership of the land in 1980. Not only is it within three miles of a small community, it is located on a section of river that is esthetically pleasing and easily accessible. In short, it is a camper's dream.

The camper's dream, however, becomes a nightmare for several reasons. Conflicts between several user groups, most notably between campers and local residents pose some serious problems. These user groups have different views on how these problems should be resolved. Most campers feel there are no conflicts and want no new regulations but want better enforcement of existing rules. Local residents want campers out of areas that have historically been closed to overnight camping, development of designated camping areas and a guarantee that refuse and human waste be removed when the campers leave.

Camping within sight of the AuSable may no longer be allowed since Congress designated the river as "Scenic" in October 1984. Although the campers may be drawn back or screened from river users, the other problems will still remain.

The study conducted, though limited in scope, clearly shows these problems and provides data for comparison to other studies done in similar situations.

Hypothesis

User conflicts at the AuSable River Loop Area developed, in large part, because prior to 1981, no overnight camping was legally allowed. When the U.S. Forest Service took ownership of the area, camping was immediately allowed, but no provisions were made for the inevitable increases in the number of overnight campers.

The lack of proper camping facilities and designated camping areas was at the heart of the problem. This coupled with a growing number of overnight users and the lack of developed campsite regulations, quickly drew the area residents into conflict with the campers. The separation of user groups, addition of proper facilities, and implimentation of campsite regulations should solve many of the loop area problems.

Delimitations

This study deals with the 1984 summer recreation season. The geographical location is a loop area along the segment of the AuSable River that has been designated a Scenic River. Dispersed campers of the loop area (their characteristics, attitudes, preferences and demands) and nearby homeowners of the loop area (their preferences and concerns) are the subjects of the study.

Limitations

The major limitation of this study is the small size of the sample populations of campers and residents and the informal manner in which the [illegible] collected. Due to an insufficient number [illegible] addresses of loop recreation users, [illegible] residents near the area, little could be [illegible] given to conduct a statistically acceptable sample. To be more statistically accurate, a "sample" of all permanent and seasonal residents and all the loop area users would have been preferable,

such as, a "sample" of fishermen, canoeists, campers and others. In preserving the anonymity of camper respondents, their questionnaires and return envelopes were not individually identified. Thus, it was not possible to send follow-up material to them.

This study is also limited to the 1984 summer season. To more accurately predict trends in recreation use, data on all users should be collected over several seasons.

CHAPTER II

LITERATURE REVIEW

Prior to any research of the project area, it was necessary to review past studies and reports on the AuSable. This gave a sense of history to the project. Those reviewed included the following:

Re-evaluation of the AuSable's South Branch 1971.

AuSable River Wild and Scenic River Draft Study Report and Environmental Statement 1979.

User Study Characteristics and Attitudes Michigan's AuSable River (Bassett, Driver and Schreyer 1972) (Appendix A-Literature Cited)

Other studies helped relate the AuSable River with other river systems and other camping areas. These other studies included:

Knopf and Lime (1984)

Dawson, Decker, Lime and Knopf (1979)

Clark, Koch, Hogans, Christensen and Hendee (1984)

Hendee, Hogans and Koch (1976)

Dawson, Decker and Snolka, Jr. (1982)

McAvoy (1982)

Krejcarek (1967)

A review of these studies also helped determine the mechanics of user surveys and applicability to management decisions. Data from these studies were used in comparison with data from the project's questionnaire.

During the summer of 1984, a sample survey was done of campers in the project area. The survey consisted of

counting the number of tents or other camping units, the number of people and where possible, recording the name and address of campers at each site.

The National River Recreation Study Mail Questionnaire (Knoff and Lime 1984) (Appendix B) was sent in December of 1984 to those recorded campers of the project area. This questionnaire was used because it dealt with many of the issues and concerns of the project area. At the time it was felt this was the only questionnaire that met Forest Service requirements. This questionnaire was also selected because it dealt with many subjects found in the previously referenced river and camping studies.

CHAPTER III

PROCEDURES

Subjects

As stated in Chapter I, the subjects of this study were summer 1984 loop campers and residents near the loop area. During 1984, A Forest survey observed 524 loop campers during 1984. The names of 45 campers were recorded by a Forest Service employee who obtained the campers' names and addresses. There are eight permanent residents and 75 seasonal residents near the loop. Contacts were made with six permanent and three seasonal residents. These two groups will be referred to as the sample population of campers and the sample population of residents.

Instrumentation

The instrument used to collect data from campers was a "Mail Questionnaire" with cover letter (Appendix B). This questionnaire was developed by the North Central Experiment Station during its National River Recreation Study (Lime, Knopf and Peterson 1981). The purpose and uses of this questionnaire were given in a later North Central Experiment Station publication (Knopf and Lime 1984). This questionnaire was broad enough to be applicable to river oriented dispersed camping.

No formal questionnaire was used in talking with residents. However, Table 8; "Management Options Supported or Opposed by Visitors" (Dawson, et.al. 1981) was adapted for talking to residents. Responses to like questions were sought from each landowner for purposes of comparison (See Appendix C).

Collection of Data

A sample survey was done of campers in the project area during the summer of 1984. The survey consisted of counting the number of tents or other camping units, the number of people, and where possible, recording the name and address of campers at each site. On December 17, 1984, a questionnaire with cover letter was sent to each camper by certified mail. A return addressed and postage paid envelope was enclosed with each questionnaire. After completing the response, they were requested to return it by the end of December. At the time, maintaining the respondents' anonymity was of primary concern. Because questionnaires were not identified by individual, follow-up of non-respondents could not be made. Some form of identification should have been made to allow for follow-up of non-respondents.

On March 9, 1985, informal visits were made to those residents at home near the loop area. Similar questions pertinent to the loop's management were asked. Contacts were made with six permanent and three seasonal residents.

Treatment of Data

Due to the small number of responses, all data were processed with a hand calculator. The summation of all responses pertinent to the loop area were then compared with the results of similar studies. The comparison of data allowed a more complete analysis of this study's data and made it more creditable in seeking solutions to the loop area's dispersed camping problem.

CHAPTER IV

ANALYSIS OF DATA

A. How Much Use and Where?

According to the Mio District's 1984 dispersed camping survey conducted from May through August, there were an estimated 1,269 recreation visitor days (RVD's) 1. of use recorded in the loop area. As is common with most recreation activities, use was heaviest on weekends and holidays. An estimated 1,114 RVD's (88%) were recorded during weekends (See Table 1 and Appendix D, Table 1).

Site 1 received the most use with 570 RVD's (45%). The average number of campers observed at this site was 9.6 (See Figure 4, and Appendix D, Figure 1). However on Labor Day weekend at least 27 people camped at this site.

TABLE 1

Summation of Use by Site and Total Loop Use
for Weekends and Weekdays, May - August, 1984

Number of Campers/Visitor Days 1/

	SITE									
Total of Sample Observations	1	2	3	4	5	6	7	8	TOTAL	
Weekend	217 378.5	117 199	9 13	57 98	88 155	14 28	7 14	8 18	517 903.5	Campers Visitor Days
Weekday	4 6	3 3					*		7 9	Campers Visitor Days
Calculated Totals by Site and Loop										
2/Weekend	268 467	144 245	11 16	70 121	108 191	17 35	9 17	10 22	637 1114	Campers Visitor Days
3/Weekday	69 103	52 52							121 155	Campers Visitor Days
Total by Site and Loop	337 570	196 297	11 16	70 121	108 191	17 34	9 17	10 22	758 1269	Campers Visitor Days

1/ Visitor Day equals 12 hours of activity at a site.

2/ 3' Weekends and holidays divided by 30. Sample days equals (f) 1.233.

3/ 86 Weekdays divided by 5 sample days equals (f) 17.2.

* Site occupied but no one observed.

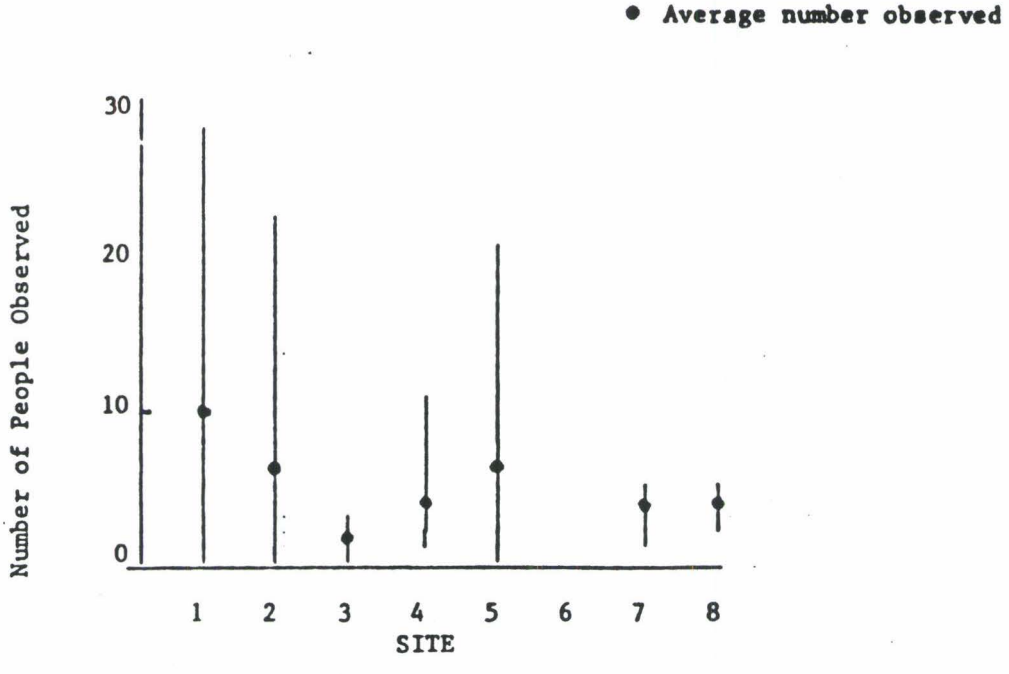

Figure 4: Average number and range of people observed for each site, May - August, 1984.

1. One recreaction visitor day is 12 hours of recreation activity.

Site 2 received an estimated 297 RVD's or 23 percent of the loop's total camping. The average number of campers observed was 7 but ranged up to 22 on the weekend of July 22.

Site 4 was the fourth most popular spot with an estimated 121 RVD's or 10 percent of the loop's total camping. The average number of campers observed was 4.1 but went up to 10 on June 17.

Site 5 was the third most popular site with an estimated 191 RVD's or 15 percent of the loop's total camping. The average number of campers observed was 6.7 with a high of 19 on May 26.

Sites 3, 6, 7 and 8 had a combined estimated total of 89 RVD's or 7 percent. The number of campers observed at these sites ranged from 1 to 7.

B. What Kind of Use?

The majority (52%) of responses to Question 1 (See Appendix B) "What type of group were you with?" said they camped with their families or with families and friends (Figure 5). This group is closely followed by 43 percent of camping by individuals with friends and by friends camping with others. Organizations represent about four percent of campers. Although not represented in this study's response group, individual camping does occur and represents about one percent of the total loop area camping.

A study of Huron National Forest developed campgrounds (Krejcarek 1967) showed campers then were also predominately family oriented. The major difference between the 1967 study and this study is with those campers who were of one family. The reason for this goes beyond the scope of this study.

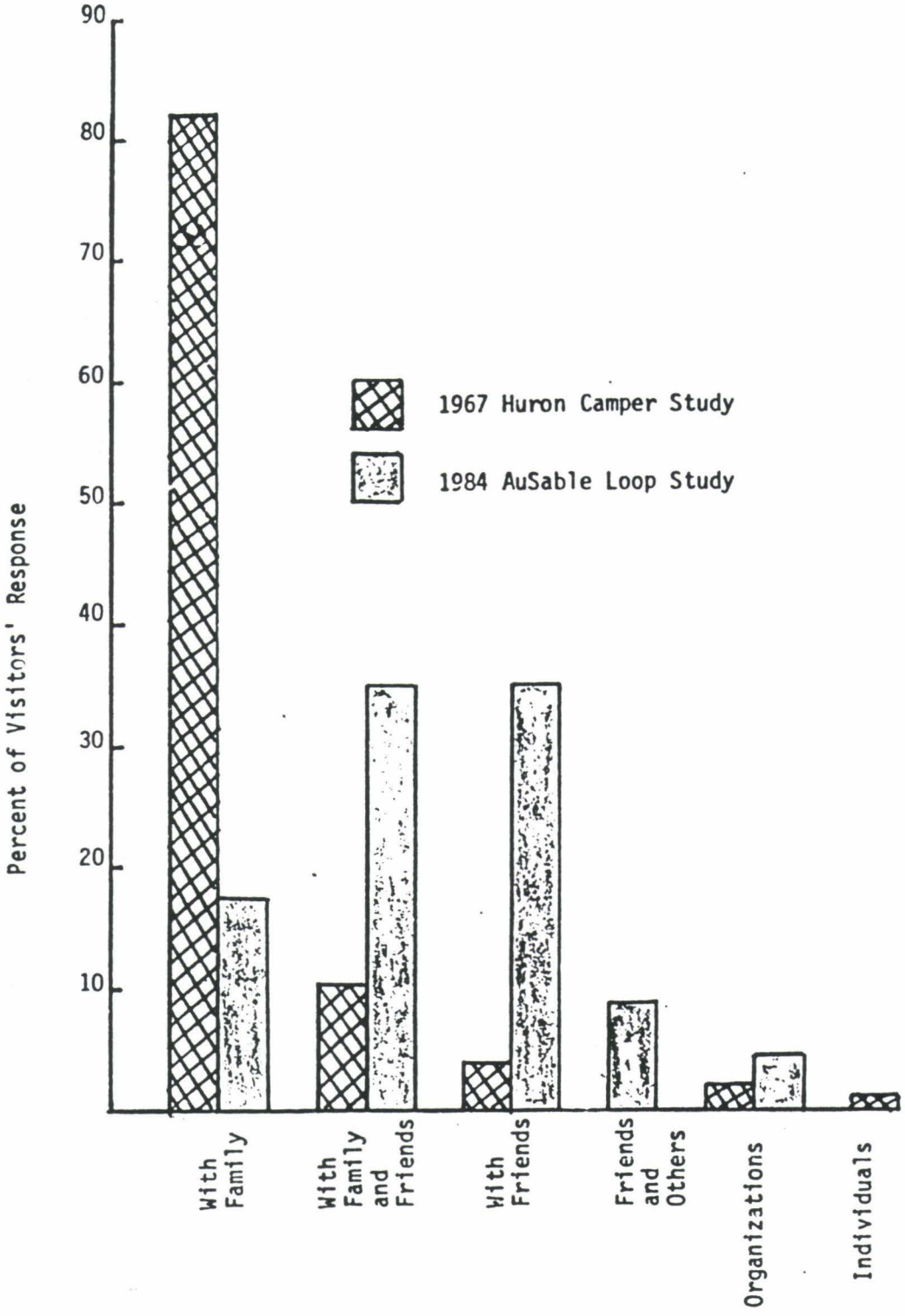

Figure 5: Comparison of group composition of campers on the Huron National Forest and AuSable Loop Area.

The one respondent who reported being a part of an organization was with a motorcycle club whose members work at the same manufacturing plant in Saginaw, Michigan. For the most part, members camp with their families and have occupied Site 1 for the last three years.

C. Who are the Campers?

The majority of respondents to Question 20 "What is your age?" were between 26 and 35 years of age (61%) (Figure 6). The range in ages was between 20 and 43. The average age was 30. The differences between the results of this study and the 1972 AuSable River Study are probably due, to the post war baby boom. National River Recreation studies done in 1978 on the Ocoee River in Tennessee and North Fork River in Missouri also show a peak in the mid 20 to 30 age range (Clark, et.al. 1984).

In response to Question 19,"What is your occupation?" the majority (41.6%) answered within the category of non-skilled labor, service and operative. The second

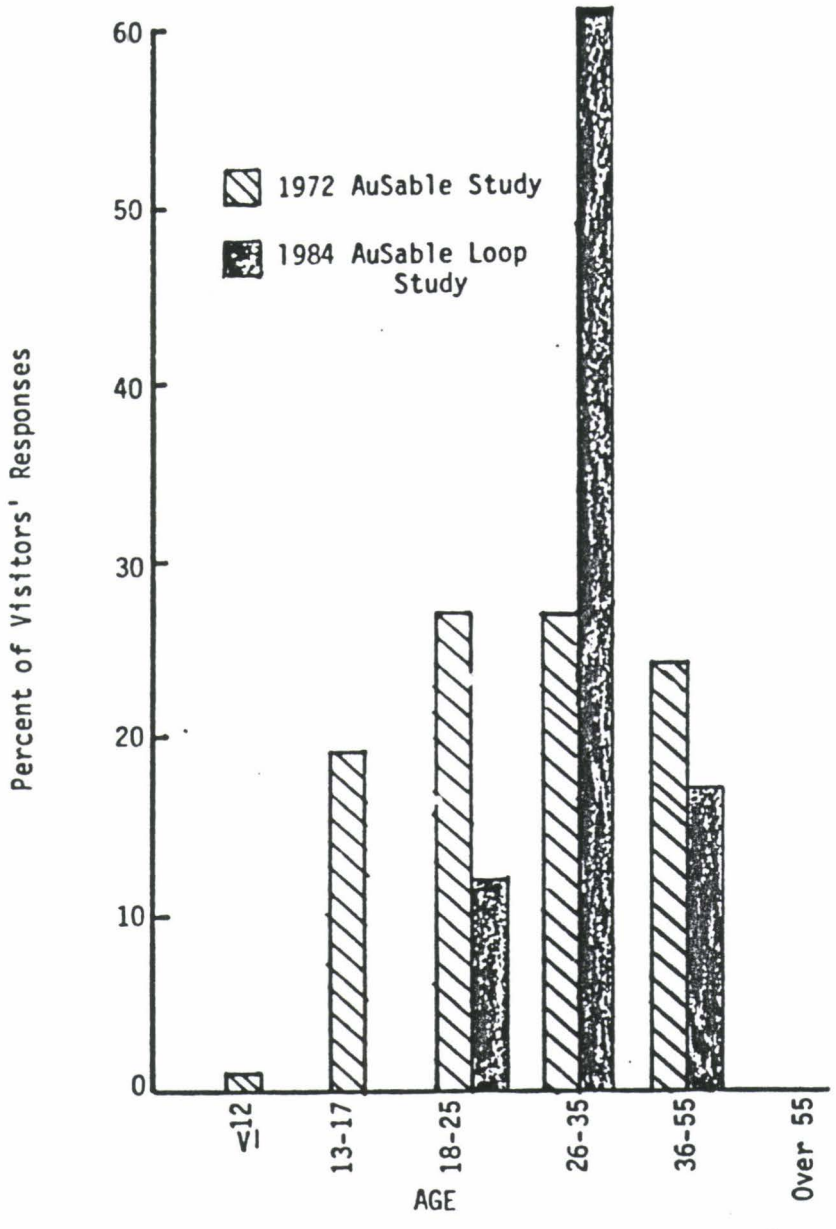

Figure 6: Comparison of ages of visitors in 1972 AuSable Study and 1984 AuSable Loop Study.

largest response (29.2%) represented skilled and semi-skilled crafts. Professional and technical people represented 16.7 percent of respondents. In relating this study to the 1972 AuSable River Study, (See Figure 7), it is difficult to draw any conclusions; however, the high percentage of non-skilled labor, service and operative category may reflect Michigan's 1984 depressed job market.

Forty-five percent of the respondents answering Question 16, "What is your educational background?" said they had completed high school. Another 43.5 percent were one to four years beyond high school and 8.7 percent had five or more years beyond high school. One respondent had completed the tenth grade. The average grade level was just over 13 years. (See Appendix D, Figure 2). In answer to Question 17, three (13%) said they were students.

One individual answered Question 21 by noting he had an orthopedic handicap. It is also important to note from Question 3 that the majority (83%) of respondents were repeat visitors. In answering question 15, 56.5 percent

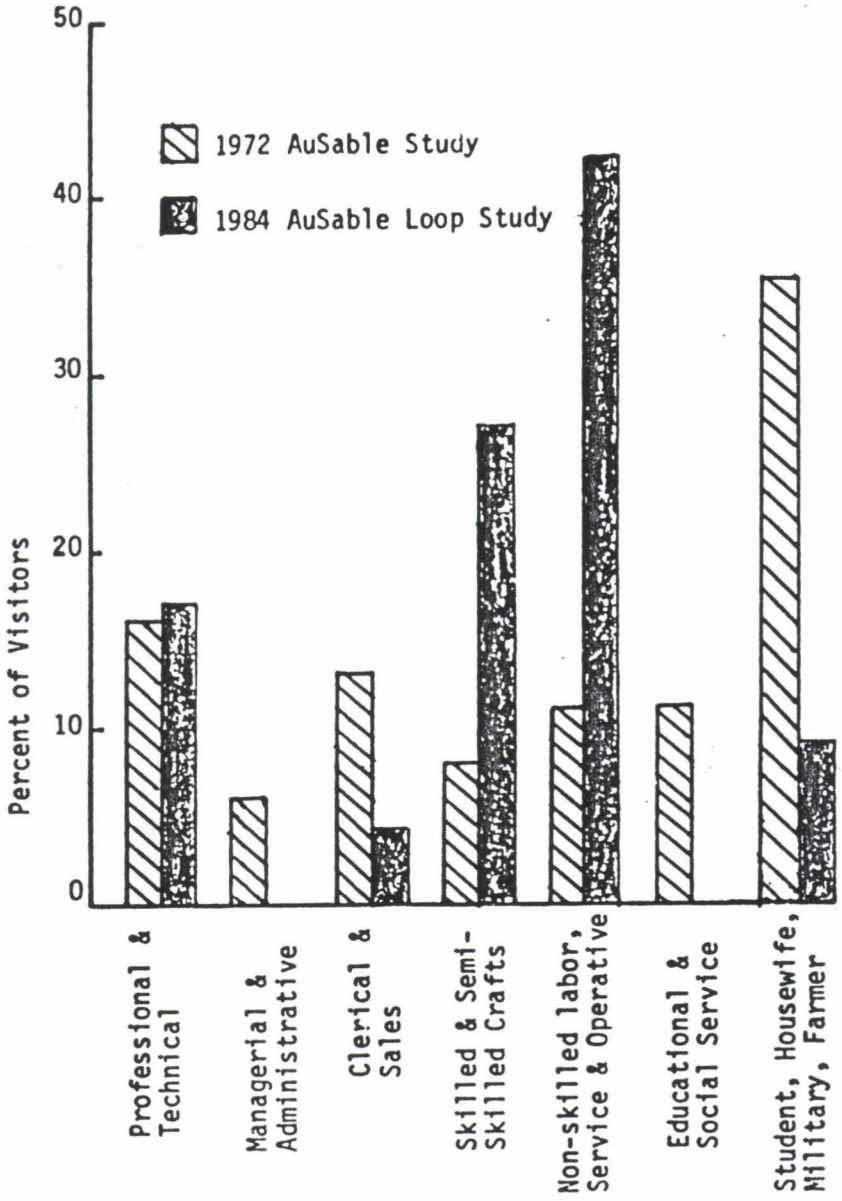

Figure 7: Comparison of occupations of visitors for 1972 AuSable Study and 1984 AuSable Loop Study.

of campers said they had visited other rivers - all in Michigan. (See Appendix D, Figure 3).

D. Where are the Vistors From?

The origin of loop campers was no surprise. The results of the 1984 dispersed camping survey confirmed previous studies with Huron Forest recreationists by Krejcarek 1967 and by Bassett, et. al. 1972. The vast majority of campers come from southeast Michigan (See Appendix D, Figure 4).

E. What Experiences are Visitors Seeking? (Question 14)

Campers to the loop area were unanimous in wanting to view scenery, have a change from daily routine, and be away from the noise back home. (See Appendix D, Table 2) Over 90 percent desired to be close to nature, get away from the usual demands of life, experience peace and calm, do some camping and to give their minds a rest.

Respondents were positive towards most of the listed activities and experiences. However they were neutral about wanting to be alone, desiring to talk to new and varied people, or wanting to take a hike. Although the AuSable does not have any rapids, about one half of the respondents desired to run rapids. They were not very interested about visiting historical or archeological sites, and they definitely did not desire to take chances in dangerous situations or to show-off. Although limited by data from other studies, Table 3 in Appendix D does offer a comparison of 1984 loop campers with 1972 AuSable River users and 1979 Upper Delaware users.

F. What Use Conflicts Exist?

Question 8 asked respondents if they felt there were conflicts between different groups of river recreationists. The majority (72.7%) answered, "No". Of those answering "Yes," 50 percent felt there was a conflict between fishermen and canoeists. Four other conflict groups that equally made up the remaining 50

percent were: tubers and canoeists, motorcyclists and campers, landowners and campers, and canoeists and campers.

The conflicts between fishermen and canoeists were identified with canoeists crossing fishing lines and with canoeists who were inconsiderate or inexperienced. One fourth of those identifying this conflict said they no longer fished when canoes were on the river.

Conflicts between tubers and canoeists were not closely defined, but people indicated the problems were caused by inconsiderate yelling, rowdiness and drunkeness. Motorcyclists causing noise and speeding through campsites was identified as the motorcyclist-camper conflict. The problem between landowners and campers was attributed to improper disposal of human waste left by campers. Canoeists stopping and interrupting campers was the reason given for the canoeists-camper conflict.

In Question 9, when asked if they felt more controls were needed to keep these conflicts from occurring, over 70 percent of the respondents again answered, "No."

Therefore, the majority felt no conflicts existed and no more controls were needed to keep conflicts from occurring.

Similar responses were obtained in a study of dispersed campers on three forests in the Pacific Northwest. That study concluded:

> In general, our observations and these data suggest that dispersed, roaded areas are relatively self-regulating. Each type of user tends to find their particular niche, and through such self-selection, minimize conflicts. For example, in one area of the Taneum-Manastask, motorcyclists and horse users are often seen at each end. This is done here and elsewhere without formal regulation or zoning (Clark, et.al. 1984).

G. What Management Problems Exist?

Fifty things that could go wrong on a trip are listed in Question 6 of the mail questionnaire. This gave the campers an opportunity to rate the degree to which each was a problem for them (See Appendix D, Table 4). It also allowed for a visitor rank ordered list of management problems of the area (See Appendix D, Table 5) and allowed for a comparison with other studies (Table 2). In general, campers did not believe there were many problems.

About three-fourths of the campers listed garbage disposal as the greatest problem encountered. Around two-thirds listed lack of drinking water and insufficient information about things to do and see in the area as a serious problem. Presently, in the loop area, no garbage cans are provided, nor are there any drinking water facilities or information about things to do or see provided. Also, about two-thirds thought litter in and on the banks of the river was a big problem. Approximately one-half felt campsites occupied by others and people being inconsiderate were problems.

TABLE 2
COMPARISON OF PROBLEMS ENCOUNTERED

Problems Encountered	Not a Problem	Slight to Very Serious Problem	Total Responses	Study
	Percent	Percent	Number	
	31	69	1361	1972 AuSable
Too few garbage cans.	33.8	66.2	228	1979 Upper Delaware
	21.7	78.3	23	1984 AuSable Loop
	(not asked in 1972 AuSable Study)			
Too few drinking water sources.	39.9	60.1	228	1979 Upper Delaware
	34.8	65.2	23	1984 AuSable Loop
	(not asked in 1972 AuSable Study)			
Insufficient information about things to do and see in area.	49.3	50.7	229	1979 Upper Delaware
	34.8	65.2	23	1984 AuSable Loop
	21	79	819	1972 AuSable
Litter in River.	29.1	70.8	230	1979 Upper Delaware
	34.6	63.6	22	1984 AuSable Loop
	30	70	818	1972 AuSable
Litter on Banks.	25	80	228	1979 Upper Delaware
	36.4	63.6	22	1984 AuSable Loop
	(not asked in 1972 AuSable Study)			
Campsites occupied by others.	54.3	45.6	127	1979 Upper Delaware
	47.8	52.2	23	1984 AuSable Loop
	65	39	805	1972 AuSable Study
People being inconsiderate.	67.8	32.2	230	1979 Upper Delaware
	47.8	52.2	23	1984 AuSable Loop

The responses in this study are comparable with the 1972 AuSable River study and the 1979 Upper Delaware River Study. Some differences in the degree of perceived problems can be explained by past management actions affecting the loop area. For example, the other two studies rated litter in and on the banks of the river to be the most important problem encountered. Delaware does not have a "bottle bill", 1. and at the time of the 1972 AuSable River Study, Michigan did not have a "bottle bill" either.

Since Michigan's "bottle bill" went into effect in 1979, litter from beverage containers has been noticeably reduced. Thus, litter in and on the banks of the AuSable River is no longer the most important problem. Another example is the other two studies ranked inadequate toilet facilities high on their list of problems and this study's respondents did not. The difference is most likely due to the installation of toilet facilities at sites 1 and 5 in the loop area in 1984.

1. All carbonated beverages, including beer, must be sold in returnable deposit containers.

From this study and the 1979 Upper Delaware Study, it is apparent users want information about things to do and see in the area. More information, including information on what is considered good river user behavior, may reduce the problem noted in this study concerning people being inconsiderate.

H. Do Campers Feel Crowded?

Forty-five percent felt they saw "neither too many nor too few people," when asked, "How do you feel about the number of people you saw while camping?" (Question 7). Twenty-three percent felt they saw "a few too many people," and 27 percent felt they saw "far too many people." About 45 percent of campers said they had seen more people than they had expected and about 32 percent were neutral when asked "How did the number of people you saw compare with what you had expected to see?" (Question 5) These responses were similar to responses obtained from campers in the 1979 Upper Delaware River Study (Tables 3 and 4).

TABLE 3
Visitor's feelings about the number of people seen

	Would like to have seen a lot more people	Would like to have seen a few more people	Neither too many nor too few	A few too many people	Far too many people	Study
	Percent					
While Camping on the river	4.3	12.9	47.4	20.7	14.7	1979 Upper Delaware (n=116)
	4.5		45.5	22.7	27.3	1984 AuSable Loop (n=22)

TABLE 4
Number of People Compared with Expectations

	Far fewer than expected	Fewer than Expected	About what Expected	More than Expected	Far more than expected	Had nc Expec-tations	Study
	Percent						
While Camping on the river	5.0	10.0	35.0	29.2	7.5	13.3	1979 Upper Delaware (n=120)
		18.2	31.8	36.4	9.1	4.5	1984 AuSable Loop (n=22

As noted in both studies, a significant percent of campers saw more people than they expected and most campers felt crowded. However they limited this feeling of crowding to camping because, in both studies, the majority felt "Too many people on the river" was not a problem. Campers may feel this way for, unlike floaters, they see all the passing river traffic.

I. What Kinds of Environmental Impacts Are Seen?

Question 10 asked campers if they felt the river environment was being damaged by recreational use. The majority (56%) said, "No." Of those answering "Yes," 46 percent thought damage was caused by littering and 23 percent thought the environment was being damaged by human excrement. Four other problems equally made up the remaining responses. They were: noise pollution, tree cutting, worn areas at popular sites, and houses along the river. The 1979 Upper Delaware River Study also listed litter as the major problem.

When asked if more controls were needed to prevent recreational damage to the environment, 61 percent of the campers said, "No." Some of the campers answering yes offered suggestions such as close popular spots every other year to allow regeneration of natural growth; limit the number of people camping on the river to preserve priceless natural spots and fine litterbugs. One camper felt that more controls were not needed, but more facilities and enforcement of existing regulations were needed to protect the river environment.

J. How Satisfied Are Campers?

The majority (74%) of campers were pleased with the quality of management. Only four percent were not pleased and the remaining campers felt neutral about the quality of management (See Table 5).

Although people on the river did not bother most (70%) campers, only 48 percent agreed that the number they saw was about right, 35 percent disagreed and 17 percent were neutral. Reflecting on the actions of other people,

TABLE 5
Visitor's Feelings About Camping Experience=1984 AuSable Loop Study

Statement	Level of Agreement: Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree	Total Number of Responses
	Percent			Number
I thoroughly enjoyed the trip.	91.3	8.7	0	23
I want to go back and run that part of the river again.	91.3	8.7	0	23
I was very pleased with the scenery.	87	13	0	23
I was pleased by the job being done by managers of the river.	73.9	21.7	4.3	23
The river tip was well worth the money I spent to take it.	73.9	17.4	8.7	23
I thought the river and its surroundings were in good condition.	69.6	30.4	0	23
The people I saw on the river did not bother me.	69.6	4.3	26.1	23
I wish there had been more rapids.	65.2	21.7	13	23
The river sent through some true wilderness.	60.9	21.7	17.4	23
I did not see the types of wildlife I had hoped to see.	56.5	34.8	8.7	23
The number of people I saw on the river was about right.	47.8	17.4	34.8	23

TABLE 5
(continued)

Statement	Level of Agreement: Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree	Total Number of Responses
	Percent			Number
I cannot imagine a better river trip.	39.1	26.1	34.8	23
I was disappointed with some aspects of my trip.	30.4	39.1	30.4	23
The actions of other people on the river bothered me.	26.1	30.4	43.5	23
The river went through some very wild country.	26.1	34.8	39.1	23
I do not want to run any more rivers like this one.	0	13	87	23

44 percent of the campers said the actions of other people did not bother them; 26 percent said it did bother them; an important 30 percent were neutral or "on the fence."

In answering, "I was disappointed with some aspects of my trip," 30 percent agreed, 30 percent disagreed and 40 percent were neutral. With this response, campers were likely reflecting back to the problems they had encountered and the user conflicts they had experienced.

For the most part campers were pleased with the scenery and thought the AuSable and its surroundings were in good condition. They believed the AuSable went through some true wilderness. However, they felt the river did not offer very wild country and they did not see the various types of wildlife they had hoped to see. They also wished the river had more rapids. Despite these missed opportunities, a large majority of the campers enjoyed their trip, thought their money was well spent and wanted to return to the AuSable.

K. What Management Practices are Supported?

This section deals with how campers and residents answered a variety of potential management actions listed in Question 12. It compares their responses with those obtained in the 1979 Upper Delaware River Study. The comparisons were mostly positive. Users in both studies tended to give the same answers, and residents in both studies tended to give the same answers (See Table 6).

The differences between the two studys' user groups are the degree to which they opposed management actions. The AuSable campers showed a greater opposition to camping related regulations. Upper Delaware River campers were positive towards "allowing camping only at designated locations," and "allowing wood fires only at designated spots." AuSable campers were against these constraints. Also, Upper Delaware campers wanted "campsites provided for river users at put-in and take-out points" and the Au Sable campers did not.

TABLE 6

Comparison of Reactions to Proposed Management Actions Among 1984 AuSable Study Campers, 1985 AuSable Residents and 1979 Upper Delaware Study Users and Residents.

Management Action	Plurality Opinion to Support (+) or Oppose (-) Management Actions			
	AuSable Resident	AuSable Campers	Delaware User	Delaware Resident
Require people to carry out their own trash.	+	+	+	+
Post signs warning and advising of hazards.	+	+	+	+
Prohibit off-road vehicles in the vicinity of the river.	+	+	+	N.A.[a]
Provide more camp sites along the river between put-in & take-out points.	+[b]	+	+	-
Prohibit camping along the river.	-	-	-	+
Prohibit use of cans and other non-burnables.	-	-	-	+
Provide more public access to the river.	-	-	-	-
Provide more information along the river.	c	+	+	N.A.
Provide more distance markers along the river.	c	+	+	N.A.
Provide firewood at camp and picnic areas.	-	+	+	N.A.
Improve existing access roads to put-in and take-out points.	+	c	+	+
Allow wood fires only at designated spots.	+	-	+	+
Develope short hiking trails at points along the river.	+	+	+	-
Provide more patrols to assist and enforce regulations.	+	+	+	+
Provide more parking at access points.	+	+	+	+

a. Question not asked.

b. Only supported when increased camping was to be controlled within a designated area.

c. Equal number support and oppose action.

TABLE 6
(Continued)

Management Action	Plurality Opinion to Support (+) or Oppose (-) Management Actions			
	AuSable Resident	AuSable Campers	Delaware User	Delaware Resident
Prohibit motorized watercraft on the river.	-	-	-	-
Improve the loading areas at put-in and take-out points.	+	+	+	N.A.
Require every group to have approved first-aid equipment.	+	c	+	N.A.
Be more aggressive in the enforcement of rules.	+	+	+	+
Allow camping only at designated locations.	+	-	+	+
Restrict the number of people using the river at any one time.	+	-	-	+
Achieve better spacing among groups by assigning time of day.	+	-	-	+
Limit the number of people per group on the river.	+	-	-	+
Have each group be assigned where they are to camp.	+	N.A.	+	+
Prohibit wood fires altogether	-	-	-	N.A.
Provide campsites for river users at put-in and take-out points.	-	-	+	+

Although Upper Delaware users were more supportive of management actions, both user groups felt strongly about "requiring people to carry out their own trash," and "provide distance markers along the river." The majority of both groups also supported management actions to "post signs warning and advising of hazards, provide more information along the river identifying facilities and points of interest, provide firewood at campsites and picnic areas, prohibit motorized watercraft on the river, and provide more campsites along the river" (See Appendix D, Table 6).

AuSable campers tended to be stronger in opposition to management actions. However, both groups were substantially against actions to "prohibit wood fires altogether" and "prohibit camping along the river." The majority of both groups were also against movements to "limit the number of people per group allowed on the river, achieve better spacing among groups by assigning the time of day when each group may begin its trip, and restrict the number of people using the river at one time" (See Appendix D, Table 7).

Residents of both studys were in agreement on most management actions. Both wanted to see more regulation of river users. However, like AuSable campers, AuSable residents showed a greater opposition to camping related regulations. Unlike Upper Delaware residents, AuSable residents did not want to "prohibit camping along the river, prohibit the use of cans and other non-burnables, or prohibit the development of short hiking trails at points along the river." However, AuSable residents agreed with AuSable campers and did not favor campsites at put-in and take-out points, apparently to reduce conflicts identified earlier.

Comparison of the other studys relating to rivers and dispersed camping use showed similar results with this study. Most often, when asked like questions, all users replied the same.

AuSable campers and residents supported the following management actions:

1. Develop short hiking trails at points along the river;

2. Provide more campsites between put-in and take-out points;
3. Provide more parking at access points; and
4. Improve the loading areas at put-in and take-out points.

Law Enforcement and use Restrictions

1. Require people to carry out their own trash;
2. Prohibit off-road vehicles in the vicinity of the river;
3. Provide more patrols to assist and enforce regulation; and
4. Be more aggressive in the enforcement of rules.

A majority of the AuSable campers supported the following managemert actions:

Information Programs

1. Provide more distance markers;
2. Post signs warning and advising of hazards; and
3. Provide more information along the river identifying facilities and points of interest.

CHAPTER V

SUMMARY AND CONCLUSION

Camping at the AuSable River loop area near Mio in northern Michigan has only legally been allowed since the United States took ownership of large tracks of land adjacent to both sides of the river in December 1980. Conflicts between various user groups have grown in intensity since the summer of 1981. A questionnaire was sent to 45 summer 1984 campers and nine area residents were polled to determine what problems and conflicts existed at this site and what could be done to rectify them. Because of the limited number of responses to the questionnaire, other more detailed studies of similar camping situations were used to determine user characteristics and preferences. Conflicts between area residents and campers pose serious concerns which must be addressed quickly through management actions-especially in light of the AuSable's recent "Scenic" designation by Congress.

Summary of Procedures and Findings

Based on 23 responses to a questionnaire sent to summer 1984 loop area campers, user characteristics and preferences were determined for the study area. Nine local residents adjacent to the loop were questioned in 1985 to obtain their preferences of management actions to alleviate the conflicts between area residents and campers. The summation of all responses were compared with the results of similar studies.

User characteristics showed campers were mostly family oriented and from southern Michigan. They were in groups that averaged less than ten people. Most campers were between the ages of 26 and 35. Their occupations centered around what may be called "blue collar" jobs. Almost all campers had at least a high school education, and a majority had received education beyond high school. The majority had been on trips to other rivers and came to the AuSable for such experiences as, "to view scenery, have a change from daily routine, and be away from the noise back home."

Campers preferred, in order of preference, sites 1, 2, 5,and 4. They camped primarily on weekends.

Their most important problems were "too few garbage cans, too few drinking water sources, insufficient information about things to do and see in the area, and litter in and on the banks of the river". The majority supported management actions like "providing more distance markers along the river, requiring people to carry out their own trash, and providing more information along the river identifying facilities and points of interest."

Conclusion

Based upon the findings and within the limitations of this study it is possible to deminish user conflicts in the loop area by the separation of campsites from day use areas, addition of camping facilities, and implementation of camping regulations.

Discussion and Implications

Conflicts between local residents and campers over access to loop area sites, especially Tunison's Landing, and

between campers and canoeists limit the experiences these users desire in the loop area.

Local residents have expressed these problems to various media in the area and to their government representatives, especially the problem of human waste. Although adjacent landowners have complained about the problems associated with overnight camping, they are not opposed to camping and campfires in designated areas.

Most campers prefer little or no regulation as pointed out in the data and want to see a carry in/carry out trash policy. However they have expressed the need for more trash recepticles and sources of drinking water. Both the majority of campers and residents agree camping facilities should not be at canoe put-in and take-out sites but should be established at areas between those sites. The majority of these two user groups also agree campers should carry out their own trash and do not need additional public access to the river.

The 1968 Wild and Scenic Rivers Act P.L. 90-542 calls for protecting and enhancing the aesthetic, scenic, and historic values which caused the river to be designated.

Although conflicts between users are not addressed in the Wild and Scenic Rivers Act, if allowed to go unchecked, these conflits would degrade the values which caused the Au Sable to be designated a Scenic River. Therefore, the Forest Service must implement more developed recreation management for the area. It must establish day use and camper use sites and post regulations for public information.

In general, Forest Service policy emphasizes campgrounds at recreation experience levels one through three. The Huron-Manistee National Forest's preferred alternative to its management plan stresses management areas that include semiprimitive and other dispersed recreation opportunities. Although presently managed as roaded natural, the AuSable Scenic River is likely to be managed as a Semi-primitive-motorized Area.

Given this policy direction and that of the potential Forest Plan, it would be best to conceive the loop's management within the context of semi-primitive-motorized use and specific developments at the Level 2 recreation experience.

Semiprimitive, motorized and Level 2 recreation experience management will provide the majority of loop users with the degree of development they desire while maintaining the majority of the experiences they are seeking.

Recommendations (See Figure 8)

My recommendations for the AuSable River Management Plan are:

1. Provide an entrance information site at the junction of the loop road and the road to site 1. This information site will provide a map of the area and information on the loop area's use and opportunities.

2. Provide an information site at Tunisons' Landing (site 1) to provide information on its use and opportunities.

3. Provide a volunteer host to provide campers and day users with information about the loop area and the river.

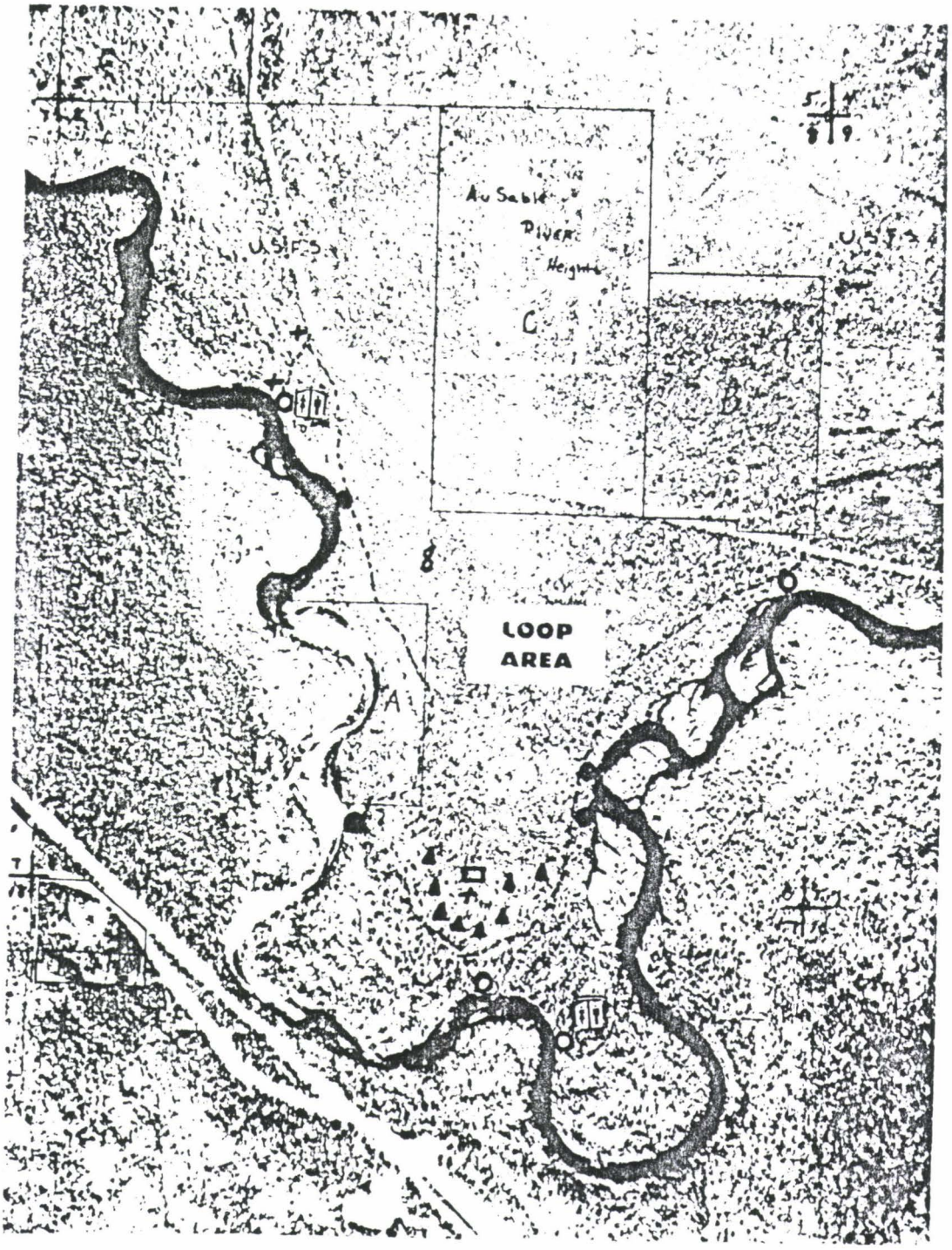

Figure 8. Recommendations for Loop Study Area

Legend
- ● Remaining original campsites
- ▲ Proposed Campsites
- ▭ Proposed Facilities Area (dumpster, toilets, water)
- ○ Change to Day Use Areas
- + Proposed Information Areas
- Existing Toilet Facilities

These first three recommendations will satisfy the campers desire for more information along the river and for more information about things to do and see in the area.

4. Change present camp sites to day use areas and post the sites accordingly. This would meet scenic river criteria by discontinuing camping sites not screened from the river, and it would remove present camper - landowner conflicts at Site 1 and camper - canoeist conflicts at Sites 1 and 5. It would also be easy for campers to understand that all sites between the river and the road are closed to camping. However not all sites between the river and the road are within plain view of river users. Some sites are screened. A preferred alternative would be to change present camp sites to day use sites only where camping is within view of river users. Those sites that are screened from the river such as sites 2, 3, 6, and 7 would remain as camp sites. All the sites would be posted to indicate day use or camping.

5. Designate the southern half of the area within the loop road as a Level 2 experience camping area. Provide centrally located vault toilets, hand pump, and dumpster. This recommendation will satisfy the homeowners main concern that camping take place in designated areas and provide for human waste disposal. It satisfies the campers problems of no drinking water facilities.

Since the area is away from the river,the availability of water becomes even more important to campers. The idea of a centralized dumpster is not a true carry in/carry out policy. However it is more realistic in this situation.

6. Provide regular patrols, primarily on weekends for the areas management (including informal collection of user characteristics and preferences and to assist the volunteer host). This will satisfy homeowners and campers concerns that present regulations be enforced. It also provides campers with a Forest Service officer that can help them with their concerns or problems.

7. Designate the area off-limits to unlicensed vehicles. This satisfies campers and homeowners common concern over the use of off-road vehicles in the loop area.

8. Collect data on river recreation users with National River Recreation Study data collection methods on a recurring basis. This recommendation ensures that users needs will be heard by Forest Service managers and that managers can continue to meet user needs within the policy of Scenic River Criteria and the goals of the Forest Plan.

VI APPENDIX

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MAIL QUESTIONNAIRE

(NATIONAL RIVER RECREATION STUDY)

This survey is voluntary. While you are not required to respond, your cooperation is needed to make the survey results comprehensive, accurate and timely. Thank you!

THIS SURVEY PERTAINS ONLY TO YOUR RIVER TRIP IN 1984

1. On your river trip, what type of group were you with? (Check all that apply)

   ( ) By myself
   ( ) Family
   ( ) Friends or acquaintances
   ( ) With people I didn't know prior to the trip
   ( ) Club or organization -- please give type _____

2. How long before your river trip did you actually decide to go? (Check one)

   ( ) Less than 24 hours
   ( ) More than 24 hours, but less than one week
   ( ) One week to one month
   ( ) One month to six months
   ( ) Six months to twelve months
   ( ) More than one year

3. How many times have you been on this particular stretch of the river? (Check one)

once only (this trip)	twice	three times	four times	five times	six to ten times	more than ten times*

*If more than ten times, about how many? _____

4. Estimate the number of people you saw at each of the following places: (Do not count members in your own group.)

	Estimated number of people seen
Where you first put into the river	_____
While travelling on the river	_____
Where you last took out of the river	_____
While camping on the river	_____

5. How did the number of people you saw at EACH of the following places compare with what you had expected to see?

	Far fewer than expected	Fewer than expected	About what I expected	More than I expected	Far more than expected	Had no expectations
Where you first put into the river	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
While travelling on the river	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Where you last took out of the river	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
While you were camping on the river	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

6. Information about problems you may have experienced during your river trip would be helpful to river managers. To what extent did you find each of the following to be a problem during your trip? (Circle the number that best describes how serious you found EACH to be.)

	Not a problem	Slight problem	Moderate problem	Serious problem	Very serious problem
Too few garbage cans	1	2	3	4	5
Erosion of stream banks	1	2	3	4	5
Litter in river	1	2	3	4	5
Litter on banks	1	2	3	4	5
Obstructions in river (logs, limbs, fences)	1	2	3	4	5
Vandalism	1	2	3	4	5
Too few drinking water sources	1	2	3	4	5
Bad weather	1	2	3	4	5
Too many homes or cottages along river	1	2	3	4	5
Muddy water	1	2	3	4	5
Water pollution	1	2	3	4	5
Off-road vehicles in river area	1	2	3	4	5
People shouting and yelling	1	2	3	4	5
People being inconsiderate	1	2	3	4	5
People drinking alcoholic beverages	1	2	3	4	5

6. (Continued)

	Not a problem	Slight problem	Moderate problem	Serious problem	Very serious problem
Too many people on the river	1	2	3	4	5
Insect bites	1	2	3	4	5
Frightening rapids	1	2	3	4	5
Motorized boats on the river	1	2	3	4	5
Airplanes flying overhead	1	2	3	4	5
Utility poles and lines	1	2	3	4	5
Railroads along banks	1	2	3	4	5
Too few rules and regulations	1	2	3	4	5
Too many rules and regulations	1	2	3	4	5
Trees and branches overhanging the river	1	2	3	4	5
People playing loud radios	1	2	3	4	5
Insufficient information about things to do and see in the area	1	2	3	4	5
Too many commercial establishments	1	2	3	4	5
Inadequate toilet facilities at put-in and take-out points	1	2	3	4	5
Too few toilet facilities along river between put-in and take-out points	1	2	3	4	5
Not enough law enforcement	1	2	3	4	5
Too much law enforcement	1	2	3	4	5
People fishing	1	2	3	4	5
Roads within sight of a river	1	2	3	4	5
Too many signs along the river	1	2	3	4	5
People being rowdy	1	2	3	4	5
Inadequate information services (signs, displays) at put-in points	1	2	3	4	5
Too many bridges across river	1	2	3	4	5
Too much nudity	1	2	3	4	5
Livestock	1	2	3	4	5
Someone in your group receiving an injury	1	2	3	4	5
Human body waste	1	2	3	4	5

6. (Continued)

	Not a problem	Slight problem	Moderate problem	Serious problem	Very serious problem
Damage to or loss of personal property	1	2	3	4	5
Navigation problems due to low water levels	1	2	3	4	5
Navigation problems due to high water levels	1	2	3	4	5
Conflicts or tensions within your group	1	2	3	4	5
Inadequate brochures showing map of river, hazards, access points, etc.	1	2	3	4	5
Nuisance Wildlife	1	2	3	4	5
Unskilled people using the river	1	2	3	4	5
Current mining activities	1	2	3	4	5
Too many hikers	1	2	3	4	5
Too many horseback riders	1	2	3	4	5
Poor quality campsites	1	2	3	4	5
Campsites occupied by others	1	2	3	4	5
Campsite locations not clearly identified	1	2	3	4	5

Other things (please specify)

_____

_____

_____

7. How do you feel about the number of people you saw at EACH of the following places? (Check the box that best describes your feelings.)

	Would like to have seen a lot more people	Would like to have seen a few more people	Neither too many nor too few people	A few too many people	Far too many people
Where you first put into the river	[ ]	[ ]	[ ]	[ ]	[ ]
While travelling on the river	[ ]	[ ]	[ ]	[ ]	[ ]
Where you last took out of the river	[ ]	[ ]	[ ]	[ ]	[ ]
While you were camping on the river	[ ]	[ ]	[ ]	[ ]	[ ]

8. For the river stretch you were on, do you feel there are conflicts between different groups of river recreationists? (For example, between canoeists and swimmers, kayakers and fishermen, landowners and canoeists, horseback riders and canoeists, etc.)

[ ] NO

[ ] YES If "Yes", between which groups are the conflicts occurring?

_____

_____

What conflicts exist between these groups? _____

_____

_____

9. Do you feel that more controls are needed to keep these conflicts from occurring?

[ ] NO

[ ] YES

10. For the river stretch you were on, do you feel the river environment is being damaged by recreational use?

[ ] NO

[ ] YES If "Yes", what kinds of environmental damages are occurring?

_____

_____

_____

_____

11. Do you feel more controls are needed to prevent the river environment from being damaged by recreational use?

[ ] NO

[ ] YES

12. Given the conditions on the river when you were there, how would you feel about each of the following management actions? (Circle the number that shows how much you support or oppose EACH action).

	Strongly oppose	Oppose	Neither support nor oppose	Support	Strongly support
Provide more points of public access to the river	1	2	3	4	5
Require people to carry out their own trash	1	2	3	4	5
Provide more campsites along the river between put-in and take-out points	1	2	3	4	5
Prohibit motorized watercraft on the river	1	2	3	4	5
Post signs warning and advising of hazards	1	2	3	4	5
Provide more parking at access points	1	2	3	4	5
Provide firewood at campsites and picnic areas	1	2	3	4	5
Allow wood fires only at designated spots	1	2	3	4	5
Prohibit wood fires altogether	1	2	3	4	5
Provide more patrols to assist river users and enforce regulations	1	2	3	4	5
Develop short hiking trails at points along the river	1	2	3	4	5
Prohibit off-road vehicles in the vicinity of the river, except on roads and highways	1	2	3	4	5
Improve existing access roads to put-in and take-out points	1	2	3	4	5
Be more aggressive in the enforcement of safety rules and regulations	1	2	3	4	5
Allow camping only at designated locations	1	2	3	4	5
Require every group to have approved first-aid equipment	1	2	3	4	5
Prohibit camping along the river	1	2	3	4	5
Restrict the numbers of people using the river at any one time	1	2	3	4	5

12. (Continued)

	Strongly oppose	Oppose	Neither support nor oppose	Support	Strongly support
Provide campsites for river users at put-in and take-out points	1	2	3	4	5
Prohibit the use of cans, bottles, and other non-burnable disposable containers	1	2	3	4	5
Limit the number of people per group allowed on the river	1	2	3	4	5
Achieve better spacing among groups by assigning the time of day when each group may begin its trip	1	2	3	4	5
Improve the loading areas at put-in and take-out points	1	2	3	4	5
Provide more information along the river identifying facilities and points of interest	1	2	3	4	5
Provide more distance markers along the river	1	2	3	4	5

13. How well do the following statements describe your feelings about the river trip? (Circle the number that best describes how strongly you agree or disagree with each statement.)

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I thoroughly enjoyed the trip	1	2	3	4	5
I did not see the types of wildlife I had hoped to see	1	2	3	4	5
I was pleased by the job being done by managers of the river	1	2	3	4	5
The number of people I saw on the river was about right	1	2	3	4	5
The actions of other people on the river bothered me	1	2	3	4	5
The river went through some very wild country	1	2	3	4	5

13. (Continued)

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I cannot imagine a better river trip	1	2	3	4	5
I wish there had been more rapids	1	2	3	4	5
The river trip was well worth the money I spent to take it	1	2	3	4	5
I was very pleased with the scenery	1	2	3	4	5
I do not want to run any more rivers like this one	1	2	3	4	5
I was disappointed with some aspects of my trip	1	2	3	4	5
The river went through some true wilderness	1	2	3	4	5
I thought the river and its surroundings were in good condition	1	2	3	4	5
The people I saw on the river did not bother me	1	2	3	4	5
I want to go back and run that part of the river again	1	2	3	4	5

14. Some possible reasons why people take river trips are listed below. Think about why you took your river trip and circle the number that best shows how much you agree or disagree with EACH of the following statements..

I took this river trip because I wanted...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
To view the scenery	1	2	3	4	5
To be part of a group	1	2	3	4	5
To test and use my equipment	1	2	3	4	5
To be close to nature	1	2	3	4	5
To run rapids	1	2	3	4	5
To talk to new and varied people	1	2	3	4	5
To be my own boss	1	2	3	4	5
To do some hiking	1	2	3	4	5
To develop my skills and abilities	1	2	3	4	5

14. (Continued)

I wanted:	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
To think about my personal values	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To do some fishing	1	2	3	4	5
To strengthen my feelings of self-worth	1	2	3	4	5
To get away from other people	1	2	3	4	5
To see historical sites	1	2	3	4	5
To experience peace and calm	1	2	3	4	5
To have thrills and excitement	1	2	3	4	5
To do some camping	1	2	3	4	5
To have a change from the daily routine	1	2	3	4	5
To learn more about nature	1	2	3	4	5
To be with people having similar values	1	2	3	4	5
To do something with the family	1	2	3	4	5
To learn more about things there	1	2	3	4	5
To be with friends	1	2	3	4	5
To give my mind a rest	1	2	3	4	5
To visit archeological sites (pictographs, ruins, artifacts)	1	2	3	4	5
To be alone	1	2	3	4	5
To keep physically fit	1	2	3	4	5
To release tensions and anxieties	1	2	3	4	5
To test my abilities	1	2	3	4	5
To be away from crowds of people	1	2	3	4	5
To experience new and different things	1	2	3	4	5
To take chances in dangerous situations	1	2	3	4	5
To be away from the noise back home	1	2	3	4	5
To show others I can do it	1	2	3	4	5
To share what I have learned with others	1	2	3	4	5

15. Have you been on other river trips? (A "river trip" refers to travelling on a river or stream by innertube, canoe, kayak, inflatable raft, motorboat, etc.)

[ ] NO If "No", go to Question No. 16.

[ ] YES If "Yes", continue with "A" below.

A. On what other rivers (or other stretches of this river) have you taken trips? DO NOT include the stretch of the river on which you were interviewed.

Please list the names of the rivers below, the number of trips on each river, and name the state or foreign countries where they are located. (If more space is needed, use the last page of this questionnaire.)

River Name	Name or Location of River Stretch	Number of Trips	Year(s)	State or Foreign Country

16. What is your educational background? (Circle the number of the highest "grade" completed).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 16+
Elementary through High School Beyond High School

17. Are you a student?

[ ] NO

[ ] YES

18. Are you retired?

[ ] NO

[ ] YES

19. What is your occupation? _____

What sort of work do you do? _____

_____

_____

20. What is your age? _____years.

21. At the time of your river trip, did you have any physical impairment or handicap?

[ ] NO

[ ] YES Please describe:

[ ] Hard of hearing or deaf

[ ] Serious difficulty in seeing or blind

[ ] Respiratory disorder

[ ] Orthopedic handicap

[ ] Arthritis or rheumatism

[ ] Heart trouble

[ ] Other--please specify:_____

A brief description of our research program is on the back of this questionnaire.

Any other comments about your river experience or suggestions about managing the river are welcomed. Please use the next page to write your comments.

Thank you for your help!

MANAGEMENT OPTIONS SUPPORTED OR OPPOSED BY RESIDENTS

MANAGEMENT ACTIONS	LEVEL OF SUPPORT					TOTAL
	STRONGLY OPPOSE	OPPOSE	NEUTRAL	SUPPORT	STRONGLY SUPPORT	
REQUIRE PEOPLE TO CARRY OUT THEIR OWN TRASH						
DEVELOP SHORT HIKING TRAILS AT POINTS ALONG THE RIVER						
PROVIDE MORE INFORMATION IDENTIFYING FACILITIES						
POST SIGNS WARNING AND ADVISING OF HAZARDS						
PROVIDE MORE DISTANCE MARKER ALONG THE RIVER						
ALLOW WOOD FIRES ONLY AT DESIGNATED SPOTS						
PROVIDE FIREWOOD AT CAMPSITES AND PICNIC AREAS						
PROHIBIT MOTORIZED WATERCRAFT ON THE RIVER						
PROVIDE MORE PATROLS TO ASSIST AND ENFORCE REGULATIONS						
PROVIDE MORE CAMPSITES BETWEEN PUT-IN AND TAKE-OUT POINTS						
PROHIBIT OFF-ROAD VEHICLES IN THE VICINITY OF THE RIVER						

MANAGEMENT OPTIONS SUPPORTED OR OPPOSED BY RESIDENTS (CONTINUED)

MANAGEMENT ACTIONS	LEVEL OF SUPPORT					TOTAL
	STRONGLY OPPOSE	OPPOSE	NEUTRAL	SUPPORT	STRONGLY SUPPORT	
IMPROVE THE LOADING AREAS AT PUT-IN AND TAKE-OUT POINTS						
REQUIRE EVERY GROUP TO HAVE APPROVED FIRST-AID EQUIPMENT						
BE MORE AGGRESSIVE IN THE ENFORCEMENT OF RULES						
IMPROVE EXISTING ACCESS ROADS TO PUT-IN AND TAKE-OUT POINTS						
ALLOW CAMPING ONLY AT DESIGNATED LOCATIONS						
PROVIDE MORE PARKING AT ACCESS POINTS						
PROVIDE MORE POINTS OF PUBLIC ACCESS TO THE RIVER						
PROHIBIT THE USE OF CANS AND OTHER NON-BURNABLES						
RESTRICT THE NUMBER OF PEOPLE USING THE RIVER AT ANY 1 TIME						
ACHIEVE BETTER SPACING AMONG GROUPS BY ASSIGNING TIME OF DAY						
LIMIT THE NUMBER OF PEOPLE PER GROUP ON THE RIVER						
HAVE EACH GROUP BE ASSIGNED WHERE THEY ARE TO CAMP						
PROHIBIT CAMPING ALONG THE RIVER						
PROHIBIT WOOD FIRES ALTOGETHER						

TABLE 1

Sample of Dispersed Camping in the AuSable Loop Area,
May through August, 1984

People Observed/Visitor Days

Weekends & Holidays	Site 1	2	3	4	5	6	7	8
5/19/84	1/2	1/1		2/4				*
5/20/84								
5/26/84	15/30	11/22	1/2	5/10	19/38	7/14		
5/27/84	15/30	11/22	1/2	5/10	12/24	7/14	5/10	3/6
6/09/84				4/8				
6/10/84		3/6		4/4				
6/16/84				6/12				
6/17/84				10/10				
6/23/84	5/10			2/4	3/6			
6/24/84	5/5			2/2	3/3			
6/30/84	7/14							
7/01/84	7/7		3/3					
7/04/84	2/4	1/2						
7/07/84	19/32	4/4						6/12
7/08/84	11/11							
7/14/84	9/18		2/4		15/30			
7/15/84	5/8	6/6	2/2		15/15			
7/21/84	16/32	19/38						
7/22/84	19/19	22/22						
7/28/84	25/50			2/4	1/2			
7/29/84		3/4			1/1			
8/04/84	5/10							
8/05/84	11/16.5							
8/11/84	*	7/14		2/4				
8/12/84	*	7/14		2/4				
8/18/84		7/14			2/4			
8/19/84	5/10	7/14		3/6	2/4		*	
8/25/84	8/16	2/4			7/14			
8/26/84					7/14		2/4	
8/31/84	27/54	6/12		8/16				
Total for Week-ends Holiday use per site.	217 378.5	117 199	9 13	57 98	88 155	14 28	7 14	9 18 Campers Visitor Days

Weekdays	Site 1	2	3	4	5	6	7	8
5/03/84	1/1							
5/18/84	1/1							
5/25/84		3/3					*	
6/15/84								
8/09/84	2/4							
Total for weekday use per site	4/6	3/3					*	Campers/ Visitor Days

*Occupied but not observed.

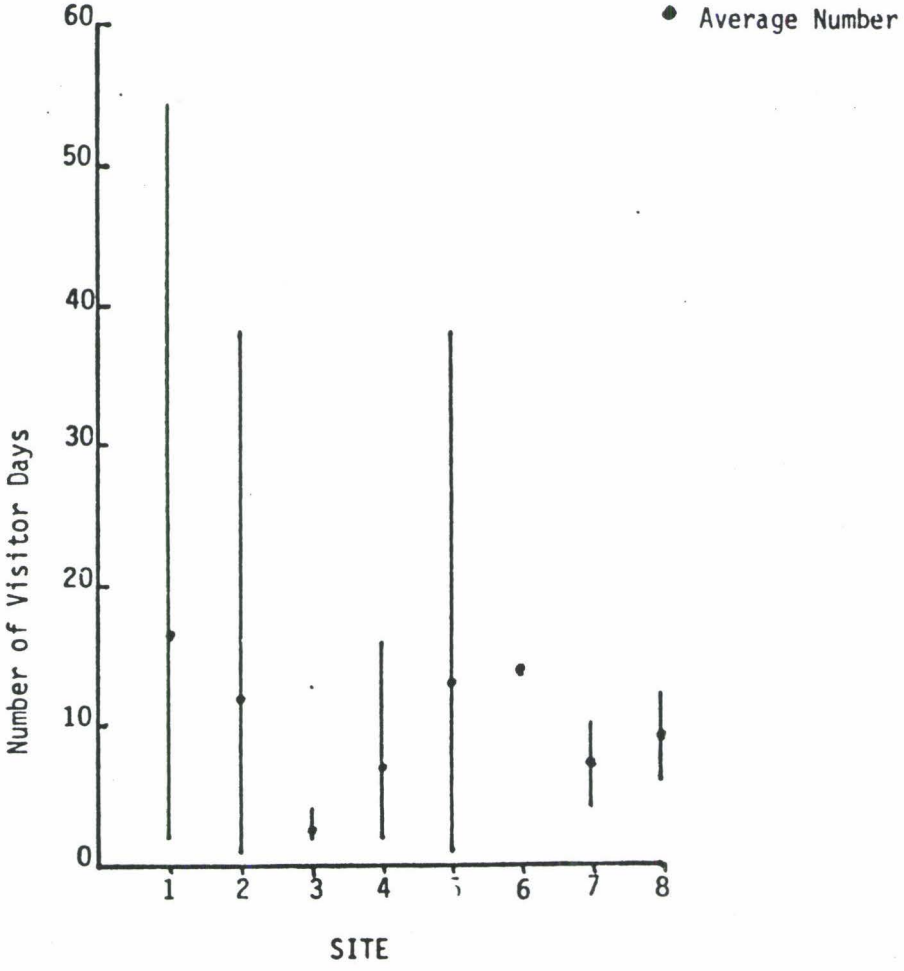

Figure 1: Average number and range of visitor days for each site, May - August, 1984.

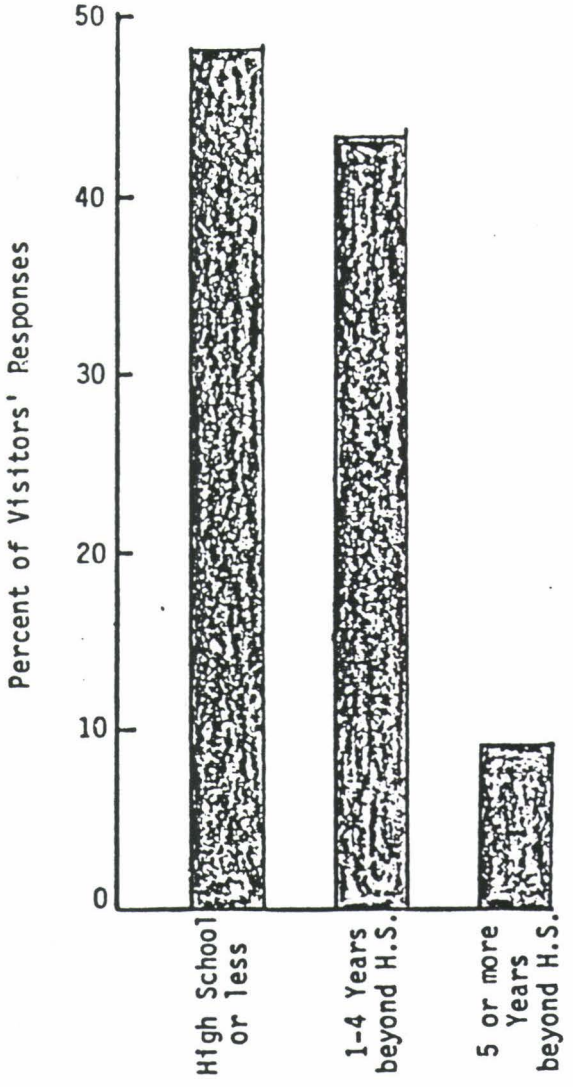

Figure 2: Educational Level of Visitors
1984 AuSable Loop Study.

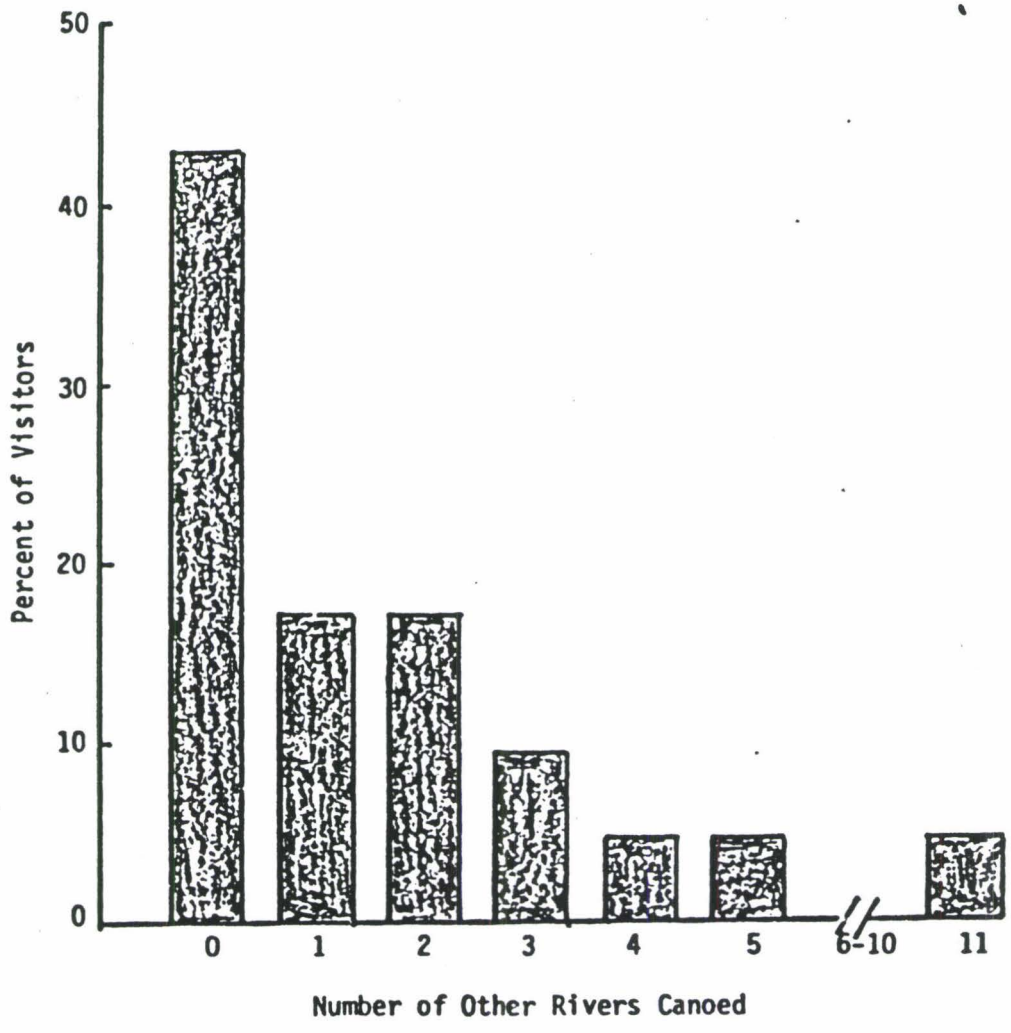

Figure 3: Number of other Rivers canoed by interviewed visitors, 1984 AuSable Loop Study.

Figure 4 : Origination of Visitors

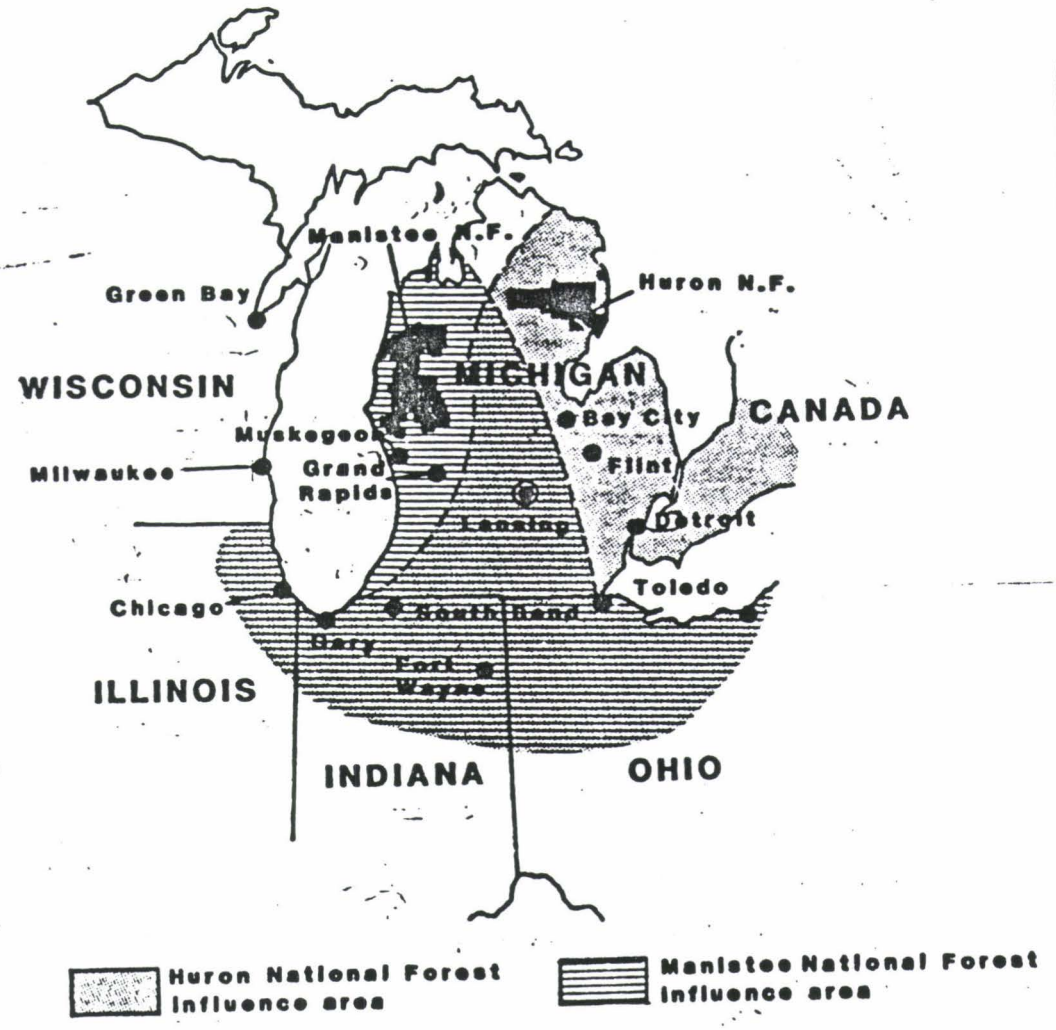

TABLE 2

Why 1984 AuSable River Campers come to the Loop

Activity/Experience	Percent Agree
To view the scenery.	100
To have a change from daily routine.	100
To be away from the noise back home.	100
To be close to nature.	95.7
To get away from the usual demands of life.	95.7
To experience peace and calm.	91.3
To do some camping.	91.3
To give my mind a rest.	91.3
To be with friends.	82.6
To have thrills and excitement.	78.3
To release tensions and anxieties.	78.3
To experience new and different things.	73.9
To be away from crowds of people.	65.2
To be with people having similar values.	60.9
To be part of a group.	56.5
To get away from other people.	56.5
To learn more about nature.	56.5
To do something with family.	56.5
To develope my skills and abilities.	52.2
To learn more about things there.	52.2

TABLE 3

Comparison of 1984 Loop Campers
with 1972 AuSable River Users and
1979 Upper Delaware Users

Activity/Experience	Percent Agree + Strongly Agree		
	AuSable 1984	Upper Delaware 1979	AuSable 1972
To view the scenery.	100	83.7	a
To have a change from daily routine. (Change from routine) c	100	b	86
To be away from the noise back home. (Escape city noise) c	100	b	80
To be close to nature. (Liked natural stimuli. Nice to be outdoors.)c	95.7	b	93.5
To get away from usual demands of life. (Felt free. Change from a busy job. Chance to escape clock.) c	95.7	b	72.3
To experience peace and calm. (Restful environment) c	91.3	80.2	94
To do some camping.	91.3	65.8	a
To give my mind a rest.	91.3	b	a
To be with friends. (Share experience with friends) c	78.3	71.6	79
To have thrills and excitement. (Challenge nature) c	78.3	76.6	79
To release tensions and anxieties.	78.3	b	a
To experience new and different things.	73.9	b	a
To be away from crowds of people. (Chance to escape city) c	65.2	b	82
To be with people having similar values. (Associate with people of similar interests)	60.9	b	66

TABLE 3
(continued)

Activity/Experience	Percent Agree + Strongly Agree		
		Upper	
	AuSable 1984	Delaware 1979	AuSable 1972
To be part of a group.	60.9	b	a
To do something with family. (Be together as a family) c	56.5	27.3	63
To get away from other people.	56.5	b	a
To learn more about nature. (chance to study nature) c	56.5	b	78
To develope my skills and abilities. (develope and apply skill) c	52.2	68.3	43
To learn more about things there. (learning new things) (education for myself)c	52.2	58.6	67

a. Not asked or nothing comparable.

b. Asked but information not available.

c. Parenthesis denotes 1972 AuSable River Study statement.

TABLE 4
PROBLEMS ENCOUNTERED BY AUSABLE LOOP CAMPERS

Problems Encountered	Not a Problem	Slight Problem	Moderate Problem	Serious Problem	Very Serious Problem	Total # Responses
	Percent					Number
Too few garbage cans.	21.7	34.8	13	13	17.4	23
Erosion of stream banks.	54.5	36.4		4.5	4.5	22
Litter in river.	36.4	36.4	13.6	9.1	4.5	22
Litter on banks	36.4	36.4	9.1	18.1		22
Obstructions in river.	69.6	13	17.4			23
Vandalism.	60.9	26.1	13			23
Too few drinking water sources.	34.8	17.4	13	4.3	30.4	23
Bad weather.	60.9	8.7	17.4	13		23
Too many homes or cottages along river.	78.3	8.7	4.3	8.7		23
Muddy water	82.6	8.7	8.7			23
Water pollution	68.2	13.6	9.1	4.5	4.5	22
Off-road vehicles in river area.	69.6	8.7	13	8.7		23
People shouting and yelling.	56.5	17.4	17.4	4.3	4.3	23
People being inconsiderate.	47.8	13	26.1	8.7	4.3	23

TABLE 4
(continued)

Problems Encountered	Not a Problem	Slight Problem	Moderate Problem	Serious Problem	Very Serious Problem	Total # Responses
	Percent					Number
People drinking alcoholic beverages.	65.2	13	8.7	8.7	4.3	23
Too many people on the river.	60.9	8.7	17.4		13	23
Insect bites.	56.5	17.4	17.4	4.3	4.3	23
*Frightening rapids	100					23
Motorized boats on the river.	91.3	8.7				
Airplanes flying over head	95.5	4.5				22
Utility poles and lines.	95.5	4.5				22
*Railroads along banks.	100					23
Too few rules and regulations.	82.6	8.7	4.3	4.3		23
Too many rules and regulations.	86.4	9.1			4.5	22
Trees and branches over-hanging river.	65.2	26.1	8.7			
People playing loud radios.	60.9	21.7	8.7	4.3	4.3	23
Insufficient information about things to do and see in the area.	34.8	30.4	30.4	4.3		23
Too many commercial establishments	91.3		4.3	4.3		23

*No rapids on the AuSable. *No railroads along banks.

TABLE 4
(continued)

Problems Encountered	Not a Problem	Slight Problem	Moderate Problem	Serious Problem	Very Serious Problem	Total # Responses
	Percent					Number
Inadequate toilet facilities at put-in and take-out points	60.9	13	8.7	4.3	13	23
Too few toilet facilities along river between put-in and take-out points.	60.9	8.7	17.4	4.3	8.7	23
Not enough law enforcement.	87	13				23
Too much law enforcement	100					23
People fishing.	95.7	4.3				23
Roads within sight of the river.	87	8.7	4.3			23
Too many signs along the river.	95.7				4.3	23
People being rowdy.	60.9	13	17.4	4.3	4.3	23
Inadequate information services (signs, displays) at put-in points.	72.7	13.6	4.5	4.5	4.5	22
Too many bridges across river.	100					23
Too much nudity.	100					23
Live stock.	100					23
Someone in your group receiving an injury.	95.6	4.3				23

TABLE 4
(continued)

Problems Encountered	Not a Problem	Slight Problem	Moderate Problem	Serious Problem	Very Serious Problem	Total# Responses
	Percent					Number
Human body waste.	73.9	8.7	4.3	4.3	8.7	23
Damage to or loss of personal property.	95.6		4.3			23
Navigation problems due to low water levels.	52.2	34.8	8.7	4.3		23
Navigation problems due to high water levels.	91.3	8.7				23
Conflicts or tensions within your group.	95.6	4.3				23
Inadequate brochures showing map of river, hazards, access points, etc.	59.1	18.2	13.6	9.1		22
Nuisance wildlife.	95.6		4.3			23
Unskilled people using the river.	52.2	21.7	17.4	4.3	4.3	23
*Current mining activities	100					23
Too many hikers.	100					23
Too many horseback riders.	100					23

*No mining activity along AuSable River.

TABLE 5
AuSable Loop Campers
Rank Ordering of Problems Encountered
Based on Total for Slight Problem to Very Serious Problem

	Percent	Number	Total Responses
Too few garbage cans.	78.3	18	23
Too few drinking water sources.	65.2	15	23
Insufficient information about things to do and see in the area.	65.2	15	23
Litter in river.	63.6	14	22
Litter on banks.	63.6	14	22
Campsites occupied by others.	52.2	12	23
People being inconsiderate.	52.2	12	23
Navigation problems due to low water levels.	47.8	11	23
Unskilled people using the river.	47.8	11	23
Erosion of stream banks.	45.4	10	22
People shouting and yelling.	43.4	10	23
Insect bites.	43.4	10	23
Campsite locations not clearly identified.	43.5	10	23
Inadequate brochures showing map of river, hazards, access points, etc.	40.9	9	22
Vandalism.	39.1	9	23
Inadequate toilet facilities at put-in and take-out points.	39.1	9	23

TABLE 5
(Continued)

	Percent	Number	Total Responses
Too many rules and regulations.	13.6	3	22
Not enough law enforcement.	13	3	23
Roads within sight of the river.	13	3	23
Too many commercial establishments.	8.7	2	23
Navigation problems due to high water levels.	8.7	2	23
Motorized boats on the river.	8.7	2	23
Airplanes flying over head.	4.5	1	22
Utility poles and lines.	4.5	1	22
People fishing.	4.3	1	23
Too many signs along the river.	4.3	1	23
Someone in your group receiving an injury.	4.3.	1	23
Damage or loss of personal property.	4.3	1	23
Conflicts or tensions within your group.	4.3	1	23
Nuisance wildlife.	4.3	1	23
Too much law enforcement.	0	0	23
Too many bridges across river.	0	0	23

TABLE 6
Comparison of 1984 AuSable Loop Campers
and
1979 Upper Delaware River Users
Who Support Management Actions*

1984 AuSable Loop	Percent Support	1979 Upper Delaware	Percent Support
Provide more distance markers along the river.	78	Require people to carry out their own trash.	83
Require people to carry out their own trash.	70	Develope short hiking trails at points along the river.	78
Post signs warning and advising of hazards.	61	Provide more information along the river identifying facilities and points of interest.	75
Provide fire wood at campsites and picnic areas.	61	Post signs warning and advising of hazards.	73
Provide more information along the river identifying facilities and points of interest.	61	Provide more distance markers along the river.	72
Provide more campsites along the river between put-in and take-out points.	57	Allow wood fires only at designated spots.	59
Prohibit motorized watercraft on the river.	55	Provide firewood at camp site and picnic areas	58
Prohibit off-road vehicles in the vicinity of the river, except on roads and highway.	55	Prohibit motorized watercraft on the river.	57
		Provide more patrols to assist river users and enforce regulations.	55
		Provide more campsites along the river between put-in and take-out points.	54

*Rank ordering where more than 50 percent of the response supported the management action.